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# THE American Practitioner and News.

“NEC TENUI PENNĀ.”

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“Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.” —RUSKIN.

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NUMBER I.

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## Original Communications.

### THE ORANG-OUTANG.

BY BYRON ROBINSON, M. D.,

CHICAGO, ILLS.

**O**BITUARY. The great ape with the sobriquet “Miss Dooly” orang died of ileo-colitis recently in the second year of her captivity, at the Lincoln Park Zoological Department. She was in the tenth year of her age—a nullipara, unmarried; hence left no posterity. She was a native of Borneo, weighed eighty pounds, being transported here from Singapore, in 1903, with a male orang weighing 150 pounds, who unfortunately manifested such a degree of ferocity while on shipboard that he was shot and buried at sea. “Little Mike” a brilliant, brainy orang, about six months of age, accompanied them on the voyage. “Little Mike” lived in Chicago Lincoln Park “Zoo” for seven months. He possessed such a superior order of talents that Cy De Fry announced that he would be speaking a half dozen languages in a few years. “Little Mike” improved in intelligence, powers of imitation and observation with unbounded rapidity—like homo baby—but unfortunately died before he reached the zenith of his power.

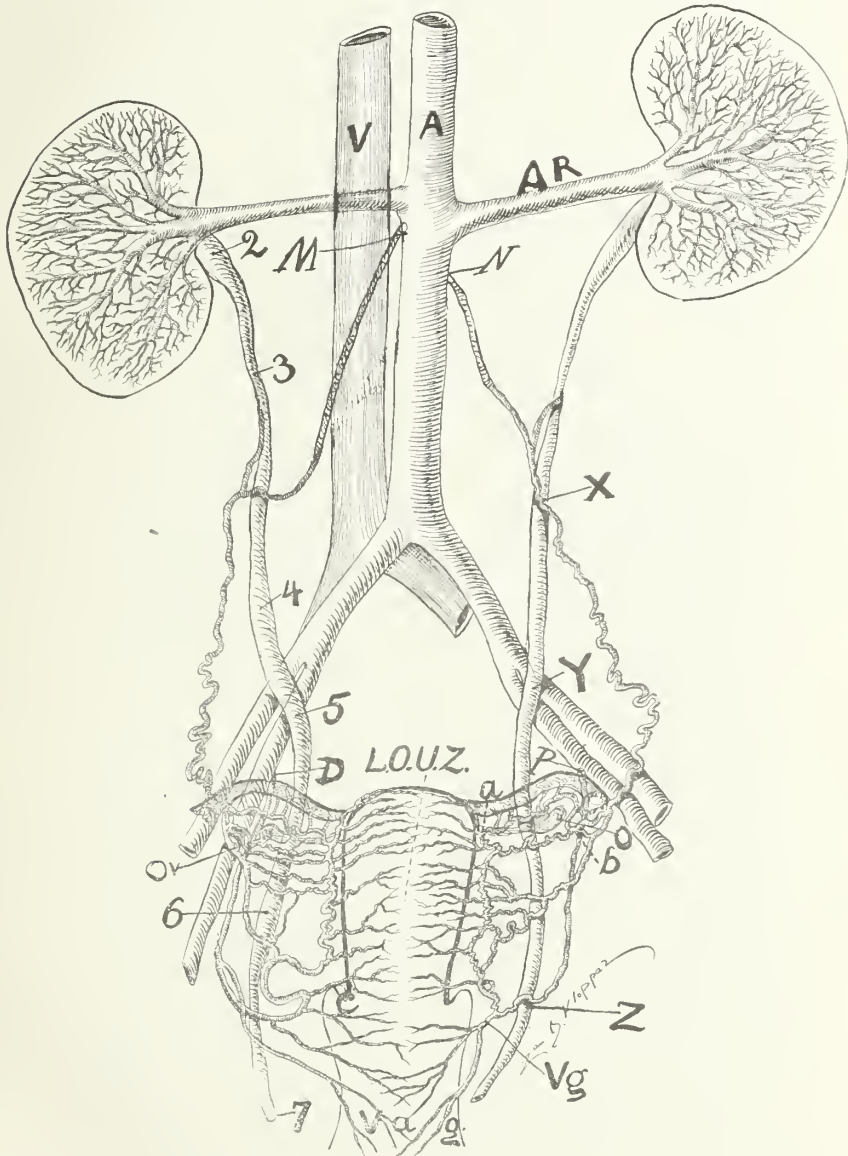
“Miss Dooly,” as she was named, was the admired of all admirers in the Chicago Lincoln Park “Zoo” for two years. Few were tired of watching her with her dignified

human action and demeanor. Physically, she was of slow and sluggish movement; mentally, a cool, quiet and calm philosopher; indifferent alike to all animal life, cultivating no friends. She was a cold-blooded observer, unsocial. No emotions of sorrow, regret or delight appeared on her countenance. There seemed to be but one being for whom she manifested regard—her keeper Cy De Fry—and when he eyed her she would not return the compliment but turn her face and gaze into space. She was no flirt, allowed no familiarity, and harbored no revenge, as many a time and oft her keeper proved. She was roughly grand, sullenly gloomy, peculiar in her isolation, and she sat upon her own throne like a sceptered hermit. She had a mind of high order and reasoned like man. She examined her teeth with the mirror and used the toothpick in a crude fashion. With the mirror she examined her eyes and removed the "specks" which had lodged in them. She retired to shelter, placed paper, leaves or other objects over her head when it rained. She made her own bed with a blanket using part on which to lie and part to cover her body.

She would plan to escape from her cage by drawing a rope through a pulley which elevated the trap door thru which she would spring before it could refall into position. She would pass the cup to be refilled with fluid to drink. "Miss Dooly" was abstemious—never a glutton. She hated all liquor, used no tobacco. She was principally a fruit-eater—boiled rice, lemon, orange, bannana. She would not eat meat. However, she would eat "champion dog biscuit," which contained 25 per cent. of sausage meat and 75 per cent. flour. Onions in general, which monkeys enjoy, she rejected and would attempt to wipe the onion smell from her hands by rubbing them against the wall of her cage. Her test of food was by the sense of smell—its odor. She once ate some ice cream; for several days, however, became attacked with dysentery; she appeared to connect the ice cream with her disease (dysentery), and henceforth rejected that dish.

"Miss Dooly" orang was fond of sugar and sweets. She dined three times daily, sleep twelve hours in the night,

no day's siestas. She defæcated about a dozen times daily, possessing a capacious colon (and sigmoid) which suggests



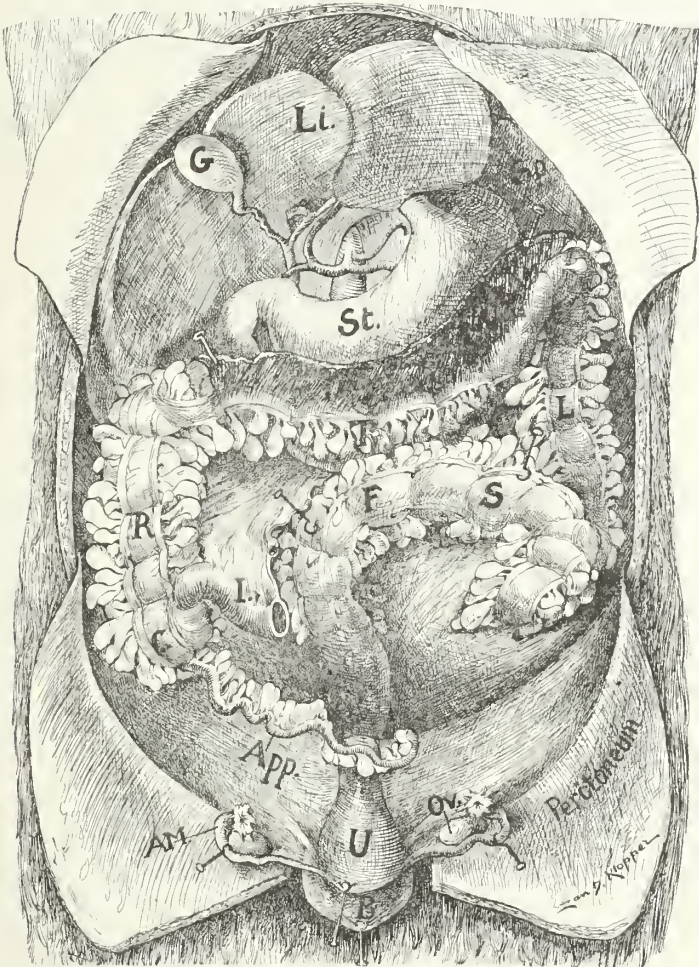
ORANG-OUTANG.

FIG. 1. The illustration is taken as an X ray after injection of the genito-urinary vascular tract. A—aorta, vena cava. P—origin of the uterine artery, and N—origin of ovarian artery. P and N—represent the spinal portion of the genital vascular circle. The aorta and iliaes represent the straight portion of the genital vascular circle. The combined represents the circle of Byron Robinson which exactly imitates that of man. L, O, U, Z—longitudinal oligemic uterine zone.

that man with practically a similar colon (and sigmoid) has developed by repression and social environments a single daily defæcation stool. Like an esquimeaux she took no bath, hated water externally and imbibed but little internally. "Miss Dooly" experienced the function of other high born females, menstruating every twenty-eight days. She was indisposed, headache for the first two days. The menstrual flow was scanty. Her mammary glands were limited in development and dimension as she was a nullipara. The uterus was absolutely human in its appearance—dimension, form, location, blood supply. Long previous to her death, the autopsy demonstrated that "Miss Dooly" experienced a salpingitis sinistra (unilateral). The left oviduct—precisely like a human—had become adherent from chronic peritonitis, in an arch direction, to the uterine fundus and the left ovary was firmly fixed to its fimbriated end by peritoneal bands. The most significant feature about "Miss Dooly" orang was her six inch appendix which lay transversely on the pelvic floor between the uterus and the rectum. It had one large (peasized) and two small fæcal concretions in its free end. The cæcum was of foetal form, rested on the psoas muscle and possessed no peri-cæcal peritoneal adhesions, because Miss Dooly's psoas muscles caused little trauma to the cæcum as practically she did not walk. In the zoological gardens autopsies demonstrate that chimpanzees die from appendicitis which is not limited to man alone. The typical appendix vermiformis is practically limited—and consequently appendicitis—to man, orang, chimpanzee and wombat. Her sigmoid flexure was thirteen inches in length and the mesosigmoid measured twelve inches. No mesosigmoiditis existed as the trauma of her psoas muscles was limited for she did not walk nor stand erect. The right colon was three and one half inches, the transverse thirteen, and left colon four inches. The only noticeable difference between an orang's colon and that of man is that the orang possesses vast numbers of epiploicæ. The enteron was ten feet in length. The liver, exactly resembling that of a man, was advanced in fatty degeneration. Man's egotism and con-



ceit induces him to think that he is the only animal capable of reasoning. Do animals think and reason? The person who is acquainted with animals does not require an answer, for he sees them thinking and reasoning every day. Animals could not live if they did not reason—and sharply too. Animals reason frequently to their degree of experience and struggle for existence. At present typical



ORANG-OUTANG.

FIG. 1. This figure illustrates the viscera of a female orang from Borneo. Its age was about ten years. App.—Appendix, six inches long, lying on the pelvic floor. U.—Uterus. C.—Cæcum. F.S.—Sigmoid flexure. Am.—Oviducted ampulla. Ov.—Ovary. St.—Stomach. G.—Gall bladder. L.—Liver. Hook drawing the omentum majus proximalward.

examples of this idea are noted in the fox, wolf, deer, wild goose.

Monkeys not only reason, but present a high order of wit. I have observed monkeys playing tricks on their fellows, e. g. I once watched a large monkey slowly and cautiously approach another who was asleep with his long tail coiled about him. The monkey seized the tail, twisting and pulling it unmercifully to and fro about two minutes, when he scampered high in cage, laughing gleefully at a safe distance, at the pain and disturbance he had caused. The orang and chimpanzee will demonstrate a remarkable degree of intelligence especially if instructed while young—resembling children. After a certain age and amount of instruction the animal appears to come to a remarkable standstill. Developmental processes appear to cease. “Miss Dooley’s” brain imitated that of a four year old child to an exactitude.

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## GENERAL REMARKS UPON DIAGNOSIS OF DIGESTIVE DISORDERS.

BY JOHN J. MOREN, M. D.,

LOUISVILLE, KY.

**D**IGESTION is the process carried on in the alimentary canal, which converts food stuff into a soluble state to be absorbed and utilized by the human economy.

The principal agents engaged in this conversion are the saliva, acid, pepsin, and pancreatic secretion, aided by the bile, succus entericus and bacteria. It begins in the mouth and ends in the colon.

Physiologically, the most important part is played by the mucous membrane as it furnishes the various secretion. However, we should not lose sight of the motor function which has not received the attention it demands, particularly by the general practitioner. Secretion and motor function are essential to good digestion, and absorption and circulation of the fluids are essential to good

functional activity. Any perversion or interference of these functions in any given portion of the tract will be manifested by a set of symptoms so called indigestion or difficult digestion, dyspepsia or painful digestion. These terms are as vague to the internist as the word tumor is to the surgeon. Indigestion is nothing but an abnormal digestion, and a diagnosis of dyspepsia gives no idea of where the trouble is located or how to treat it.

Possibly no branch of medicine has improved more in the past twenty—better, in the past ten years, than that pertaining to disease of the digestive tract. Both the internist and surgeon deserves credit for this advancement. Many cases once treated as dyspepsia, chronic gastric catarrh, are now known both clinically and pathologically and yield to surgical treatment.

At present medical literature abounds with surgical treatment of various stomach disease. The internist doubtless thinks and wonders, will he have to become a surgeon.

“Fame is but a slow decay  
Even this will pass away.”

I still console myself in a former statement, “The loop the loop” cannot replace the scenic railway.

When we stop and think what activity (a good healthy mind and body) is essential to good or unconscious digestion, it is easy to understand why it is disturbed.

If one function is deficient or over active, other functions will suffer. Poor mastication and salivation add work to the stomach and intestines; poor circulation disturbs secretion; faulty nerve supply disturbs functional activity. Anything that disturbs or interferes with the onward movement of the food material is equally important.

Trouble on the line any where from the receiver to the transmitter may cause dyspepsia.

In studying your dyspeptic cases, I would especially warn you not to lose sight of the individual side. In no special work, in my opinion, does the individual play so decided a part. To some, their suffering is “something awful,” their pain is “agony,” or a diagnostic pain is spoken of

as only "some pain." Again, look out for mental unrest, dissatisfaction, morbid fear of eating, and a poor cook.

Don't be contented with the statement, "I have a pain in my stomach." This, as you know, may be located anywhere from the ensiform to the point below the pubes. Have the patient to locate the pain, as many errors in diagnosis have followed such a simple thing. A gentleman once consulted me for painful indigestion which had been treated for several months. His pain originated from a small hernia, and all symptoms disappeared after fitting a suitable truss.

Recently a great deal has been said about the value of a test meal as a means of diagnosis. An examination of the urine tells certain findings, but does it differentiate the kidney lesion?

The test meal tells the digestive power of a stomach, but it does not tell why there is an excess or absence of gastric secretion, neither does it tell why you have retention of food material.

It remains for the diagnostician to weigh both physical and chemical symptoms. Don't delude yourself that the test meal is the strong hold of the specialist, nor delude yourself that a test meal is all that is needed to diagnose certain gastric conditions. It is my belief that by studying the associating symptoms, the meals can be avoided in a good number of cases. However, it is a good means of verifying or denying a diagnosis and is splendid routine to follow when accurately made. I would urge this routine, particularly to the beginner as it helps him to recognize the cases when it is unwise or impossible to use the tube.

The value of illumination, in my opinion, is more spectacular than real. Doubtless it is of good service in experienced hands, but to the novice it only tells that there is a light spot in the pumpkin.

By inflation the position and size can be detected, and offers a means of obtaining a knowledge which could not be gained otherwise. However, if carried too far it may interpret a big stomach from over distention. I often



think when these stomachs are ballooned, how much has it been stretched, are there adhesions that pull the stomach from its normal place, or is this position normal to this individual? Every means of diagnosis has its value, great or small, but after all the ground work, the reinforced concrete base of a diagnosis, is the "sad story," the history and symptoms of the given case.

It is impossible to refer to all the diseases of the stomach in this paper; therefore, we will consider the subject under three general classifications:

1. Functional or nervous dyspepsia.
2. Organic diseases of the stomach.
3. Stomach symptoms from abnormal conditions outside of the stomach.

#### NERVOUS INDIGESTION.

This may mean anything from a bad lobster to a bunch of hemorrhoids. The laity has caught on to the term, and the aftermath or the next day is spoken of as nervous indigestion. I believe the physician also uses the term when other conditions exist. Unfortunately, considering the difficulty from location and variable accuracy of our diagnostic means, one is partly excusable for an error in diagnosis.

If, after a careful examination, you find no evidence of a disease or mechanical obstruction, you are justified in a diagnosis of functional indigestion. I might ask, how often one can feel safe in such an exclusion?

A functional disease is an expression of a deficient, overaction, or perversion of a normal function, occurring without evidence of a structural change. Hence, we may have decreased or increased Hcl., hyperæsthesia, etc. of the stomach, arising from an abnormal nerve state. A good example is shown in Mrs. T., age 50, who suffered for sometime and took all kinds of digestives. The principal symptoms were pressure, fullness, almost constantly—had no relation to taking food. In fact, worse when the stomach was empty. No flatulency, bowels regular, sleep fine, appetite uncertain. She has a great deal to worry

her, though she remains cheerful. No test meal was used. However, I suspected a hyperchlorhydria. No evidence of organic disease of any kind could be found. Good sleep, regular bowels, with inconsistency of the other symptoms, formed the basis of my diagnosis of gastric hyperaesthesia.

Another typical form is that of hyperchlorhydria. These cases as a rule present a picture of irritable digestion dependent upon their nerve state. Often when they are happy and everything goes well, likewise their digestion; when they are troubled, indigestion results. However, you will meet cases that persist and remain the same. These are the cases that cause trouble, ulcer, obstruction of pylorus, etc. The simple, uncomplicated cases retain their nutrition, even if they do lose flesh from a restricted diet.

Whenever the skin clouds up bowels become constipated, and the patient shows a disturbance in nutrition, (colds, aches and pains, disturbed sleep, etc.,) these exclude hyperchlorhydria. Look for anæmia, ulcer, trouble in the upper right hand quadrant, arterial change, overstrain, stress or under feeding.

The past year I treated a young man who four years ago began to suffer from indigestion. The history was that of hyperchlorhydria. His symptoms changed to atonic dilatation, evidently dependent upon under feeding.

The characteristics of functional indigestion, and the basis of a diagnosis, may be formed on the following:

Inconsistency of symptoms.

No definite motor disturbance.

Absence of profound disturbance of nutrition.

Long history with but slight change of symptoms.

Absence of disease of other organs.

Symptoms depending upon or varying with the nerve state.

#### ORGANIC DISEASE OF THE STOMACH.

Under this head we have three diseases—gastritis, cancer and ulcer. Some authors include gastrectasis of muscular origin.

As in diseases of other organs the most prominent symptom is a serious disturbance of function. This disturbance is, as a rule, in keeping with the disease, and corresponds to a characteristic of this line of work, being digestive or occurring during the process of digestion. The digestive function being disturbed, it is only natural that nutrition will suffer in proportion. This fact should always command a close investigation on a differential diagnosis.

In these cases the value of a test meal cannot be over estimated—it shows the working power of the stomach, as the rapid digestion is simple ulcer, delayed indigestion in cancer, etc. The history should be complete. In fact, in my opinion the regular increase of symptoms as the duration of the indigestion extends, is of itself, one of the most pathognomonic signs of an organic disease.

A man at twenty may suffer occasionally from sour stomach, possibly dissipated till forty years of age. His appetite is not regular, distress after eating, pain two hours afterwards, occasional vomiting, irregular bowels, emaciation, and change in disposition. Test meal shows Hcl. and mucus. Physical examination may show enlarged liver and stomach may extend even below the umbilicus. Such is the history of acid gastritis. His history is progressive. There is no inconsistency, and no variation of symptoms. That opinion, formed from experience and often expressed without a positive knowledge as to the true condition, there is something wrong with their d— machine, tells the story.

A frequent source of error in diagnosis is in estimating the value of different symptoms. One symptom may have a different value associated with other symptoms. The pain, accompanied by vomiting, possibly blood, may not be as severe as that of hyperæsthesia. However, the ulcer pain is present and is localized usually in a definite spot, while that of hyperæsthesia is diffuse.

Study the character, location, the time the pain occurs and the symptoms associated with it, and the value will be easier to interpret. This also applies to other symp-

toms. Don't rely upon any one symptom but take all into consideration.

The early diagnosis of ulcer and cancer is the question, and I am free to say that I cannot help you. The symptoms must be present before I can make a diagnosis. Vomiting of blood, pain, dyspepsia, etc., are characteristic, but how often does vomiting of blood occur? Hence, the interest of discovering a reliable test for occult blood. To review this subject would be a needless repetition of what is found in literature, so I will leave that for discussion.

The differential diagnosis between ulcer, duodenal ulcer, acid gastritis, hyperchlorhydria and gastric hyperæsthesia, is indeed very difficult. This group, ptosis and the various complications accruing in the upper right hand quadrant give me more trouble than any other. It would require a special article to do them justice and reference is made for discussion.

#### DISEASE OUTSIDE THE STOMACH.

This is not a happy hunting ground—it includes everything from error of refraction to stone in the bladder. Those interested in digestive disorders should look more carefully for the evils of bodily disease upon digestion.

The "vicious circle" should be as familiar to the internist as to the surgeon. How often we are consulted for stomach trouble when the real trouble is pelvic, gall-stones, etc.

We often forget the circulation as a factor. Only recently a gentleman consulted me for indigestion of several months duration. His symptoms were obstinate constipation and pressure, fullness and flatulency. They occurred suddenly and were accompanied by a pulse of sixty, tense and bounding. I see a number of these cases, and they respond to treatment for hypertention.

This same picture, plus pain, occurs in older people with arterial change. We must remember that arterial-sclerosis often begins in the abdominal arteries, and I have seen cases which justified such a diagnosis.

Do you not often hear, "Whenever I catch a little cold



my digestion is poor." This story is told by the anaemic or neurasthenic. In these cases the power to equalize the circulation is lowered and congestion with its resulting distress is manifested.

The frequency of gall-stones should always be remembered.

The following case is reported for its interesting history:

S. D.—First seen in 1897. Previous to present trouble suffered occasional sour stomach, and dates his indigestion from attack of typhoid fever in 1895-6. He suffered heart-burn, colic pains, slight jaundice, vomits large quantities, cannot eat starchy food, emaciation, cramps in calf of legs, lower border of stomach two inches below umbilicus. Test meal showed hyperchlorhydria, hyperacidity and dilatation. Gall-bladder was distended and guard on palpation. He refused operation, and improved after passing a large stone and using stomach tube.

About two years later he was operated upon and several stones were removed. He did nicely until 1905 when he began to suffer indigestion, vomiting, pain, etc. He had the typical Kussmaul sign or peristalsis of stomach as seen in obstruction of pylorus. A diagnosis of obstruction from adhesions was made and gastroenterostomy was done by Dr. Dugan. The results were fine.

Such cases should offer no difficulty, but those with few or no typical symptoms are the ones that cause trouble. I have seen cases diagnosed gall-stones that proved, when operated upon, to be adhesions, tuberculous, etc. However, attacks occurring at irregular intervals, associated with jaundice, better, bile in the urine, evidence of a hyperacidity, and retention of food in the stomach, occurring in the gall-stone age, should be regarded with suspicion. In women you sometimes see a picture of gall-stone attacks, pain, jaundice, vomiting, etc., which is due to ptosis of the abdominal viscera. My experience has been that their pain is not the characteristic pain of gall-stones, but more or less an indescribable ache; their jaundice clears

up much quicker and the nervous element is more pronounced.

Under this head I cannot refrain from mentioning that great class spoken of as nervous women who suffer as much from indigestion as from nervousness. I do not refer to those who are nervous by nature, but to those who are nervous from disease peculiar to their sex. You find in addition to any possible pelvic disorder the various ptosis, etc. In fact, as I have often said, any specialist can find something in his line. The multiplicity of symptoms, inconsistency, variability, and relief from any pelvic trouble by operation, and afterwards good and plenty of food and sleep, show the nature of these cases.

Such cases are often seen following operations, not that the surgeon failed, but for the lack of resistance upon the part of the patient. The various ptosis may become manifest. Adhesions in a nervous subject often cause a great deal of trouble.

I see a class of cases, usually young girls, with pain indefinitely localized in the right abdomen, often interpreted as appendicitis, ulcer, gall-stones, nephroptosis, etc. I have never found symptoms typical of any of these, and from their response to treatment, I have attributed them to anæmia, auto-intoxication, neuralgia, etc.

#### DISCUSSION.

DR. LUCAS: I am very glad to have had the opportunity of hearing this practical paper by Dr. Moren. The advances in surgery in the last few years has caused many surgeons to discredit the specialists working on stomach diseases, even the making of a test meal and a chemical examination. I do not believe that any one who makes a specialty of gastric disease places so much confidence in the test meal. I believe that we get good results in determining the motor activity of the stomach. Dr. Moren has brought out the point of the consistency and inconsistency of the symptoms of certain diseases of the stomach, and I believe that is an important point. We are not able any more than the general run of practitioners to make a diagnosis the first time we see a case. It is necessary to study a case.

In the class of cases described as an excess of Hcl. it is

difficult to decide whether we have a nervous hyperchlorhydria or a hyperchlorhydria of muscular origin. In those cases if we consider the consistency of the symptoms, loss of flesh and pain after meals, etc., we can decide whether we have an organic or a functional condition.

Stockton, Kaufmann, and a number of men in the East who are interested in stomach diseases with an excess of hydrochloric acid have cleared up that point well. Very often, as Dr. Moren says, gastric symptoms are complained of and these cases clear up when the cause is located elsewhere and relieved.

I remember two cases. One was treated for nervous hyperacidity at times accompanied with fever and diarrhoea for the last twelve years. He improved under treatment and I lost sight of him for eighteen months. He came back with the symptoms returning and evidences of beginning locomotor ataxia. I went back over his history and I noticed that I had neglected to ask about his venereal history. He denied ever having had syphilis but gave a history of gonorrhœa. I referred him to Dr. Windell and he found a seminal vesiculitis. This was cured and to-day he is well.

Another case was that of a young man who was off at college at the time. He had been complaining of gastric symptoms without loss of flesh. I was suspicious of the history. He said that he had had gonorrhœa but had gotten well. I referred him to Dr. Windell and he found a chronic posterior urethritis, and in three months he was well; his bowels were moving regularly and he had no trouble with the stomach. I believe that in many cases the trouble is due to disease that exists in some other part of the body.

I make the same use of the tube to ascertain the exact position of the stomach as to determine the contents of the stomach. I have the same opinion as Dr. Moren about adhesions, but in the last six months since I have been using rose abdominal bandage my results have been very gratifying.

In all cases where the lower border of the stomach appears below the umbilicus we have an abnormal condition, especially where we have a movable kidney in addition.

DR. J. R. WATHEN: Dr. Moren has certainly gone over this field from the standpoint of the general practitioner in an elaborate way and there is little that I can add from the surgical side. I think Dr. Moren has been liberal in his views in regard to the position taken from the title of his paper, that we spend more

time upon the question of diagnosis, and he thinks that gastric ulcer and duodenal ulcer should be diagnosed by the internist. But it seems lately the surgeon has made the diagnosis and it has been confirmed by the internist. I believe that the pendulum has swung too far each way. We see in the clinical results that many of them are subjected to medical treatment and are only at last cured by the surgeon. This should demonstrate that there is a field for surgery in the treatment of these disorders. At the same time the surgeon should not operate on every case that he sees.

I should like to read some extracts from a symposium on gastric and duodenal ulcers at the last meeting of the British Medical Association which met at Toronto. Strange to say that the Americans have created a large surgical field in this line which seems to have been neglected. While good work has been done by Moynihan and others in Europe the greatest part of the work has been done by Americans. Indigestion is strictly an American disease. Mayo says "Duodenal ulcer has been masquerading under the title of gastric ulcer, especially in its chronic forms or has been undiagnosed, although sudden death from perforation and hemorrhage may have given first-hand information of some phases of the disease." "We are well within the bounds of truth in saying that at least 40 per cent of all gastric and duodenal ulcers are primarily in the duodenum, and that 90 per cent of such ulcers are called gastric." Murphy says "In 1902 I estimated the relative frequency of duodenal to gastric ulcer as one to twelve." "My more recent experience, however, gives a relative frequency of one to three."

I merely make these quotations from the proceedings of the British Medical Association to show that duodenal ulcer is more frequently found than it formerly was, and I believe if the surgeons would come in contact more with the general practitioners and get on common ground and bring out points that would lead to diagnosis I believe we would be mutually benefited, and I hope the essayist in closing will add something so that we may accurately diagnose duodenal ulcers.

DR. HENDON: I was delighted to have the opportunity of hearing Dr. Moren's excellent paper upon this subject, and he has certainly presented some phases of this subject in lights that it had not before appeared to me.

The great, burning question with myself, from a surgical standpoint with reference to this subject is, what group of evidences would justify a surgical procedure?

Another important point is refined methods of diagnosing the conditions in the stomach.

Another important point is what conditions should exist in the stomach and duodenum to demand surgical interference?

Now, when we come to consider a justification for surgical intervention, I am settled on the point so far as myself is concerned. Personally, I should not operate on any patient with a gastric disorder who had not passed through the hands of a competent physician.

Now, with regard to the discovery or diagnosis, I think that the most important point of all in discovering lesions that demand surgical intervention is that of occult blood in the stools. We could not more expect every patient suffering with ulcer of the stomach to vomit blood than we could expect every patient with gall-stones to be jaundiced. There can be no lesion existing, and no loss of tissue of the mucous membrane without the presence at sometime of blood in the stool. That point has been definitely settled.

Another point, what conditions exist in the stomach and duodenum that justify surgical operation? There are three conditions that are very apparent. One is in cases of chronic ulcer that have passed through competent hands without relief. I heard William Mayo make the statement that he had never operated on a case of gastric ulcer that had not had nine separate, different and distinct cures by medical means. That should be settled beyond the possibility of a doubt. I would not operate on these cases until it was demonstrated that the condition was incurable by medical means. Then the surgeon ceases to be the rival of the practitioner and the public tendency and the public opinion is so strong on that subject that the surgeon never will receive for treatment those conditions that can be cured by medicine. Another condition that exists is pyloric obstruction which demands surgery just as much as any other intestinal obstruction. Another condition is that illustrated by Dr. Morris, his "cob webs in the garret" as he expressed it, adhesions binding together the stomach, duodenum and the liver. Those three conditions ought to demand surgical intervention. In pyloric obstruction, not only the benign, but the malignant form, demands operation.

Now, what operation should be performed is a question that is not definitely settled. Some, like Moynihan, claim that gastroenterostomy will relieve gastric ulcer including hemorrhage. In



Robson's book on the subject the statement is made that all that is necessary to control hemorrhage is drainage, but that point has been successfully disputed by a great many men in this country. When we come to gastrectomy and operations of that sort it is a matter of personal judgment.

Acute perforations of stomach or duodenum is to be classed among imperative demands of surgery.

DR. BAILEY: I want to rise to thank Dr. Moren and the Society for the privilege of hearing this most admirable paper. It is so large that I shall not undertake to discuss it.

I want to say as an internist that I am always glad to see progress by men doing special work. I have tried to be a student of medicine for forty-nine years, realizing my limitations more day by day, and I am always more than ready and willing if I can get the aid of men who are limiting their work to special fields and are more competent than I.

I remember at the St. Paul meeting of the American Medical Association of burning the bridges behind me and saying that every case of appendicitis was surgical and not medical. In many of these cases we go too far and do not give our patients the benefit of the higher knowledge of the men doing special work. I believe that every internist ought to make himself a specialist in some line of work, because the medical field is so large that it cannot be covered by any one man. Consequently he should take up some special work.

I regret at the end of my career—it would be folly for me to undertake a special work now—that I did not take up a specialty in early life. I always appreciate the opportunity of getting aid from the specialist. As an internist I am anxious to get aid from one who is better posted than I and do not allow my pride to cause a patient to suffer by withholding better services than I can give them.

DR. POPE: Gentlemen, we have heard these words of wisdom from a man who has lived many years, who has gathered a ripe experience and we should avail ourselves of the influences he speaks of and certainly not let our pride keep us from turning over to those who are competent certain cases that they can treat better in their own line.

It is with considerable regret that I listened to Dr. Moren take a pessimistic view of the recent analytical work now being used along the line of chronic digestive disorders. I think most of us are willing to sit down and give attention to all the

symptoms and all the facts that patients are ready and anxious to present to us rarely neglecting this field, but in addition I am of the opinion that these investigations should be made in the line of confirmation and differentiation rather than in purely diagnostic light. I think few of us to-day but will admit that the majority of diseases of the stomach and the intestinal tract are functional in origin and that these disorders are largely the result of variations in the secretive or muscular function of the stomach and intestines, and it is for this reason that we administer a motor test as Dr. Lucas has well said. It enables us to confirm any diagnosis we may have surmised. Most of us will admit that symptoms alone are very uncertain. I have often found it difficult to make a diagnosis upon the symptomatology alone. It is a hard thing to make a differentiation of such a condition as neuritis from the symptoms alone, and yet we can diagnose the condition certainly by electrical tests. Now, we should not after making a diagnosis of gastric or other diseases, fail to confirm it. It never hurts to confirm your diagnosis. It may possibly clear up some conditions and throw light on others. Take for example where we make a diagnosis in gastritis; it is sometimes necessary to make a differential diagnosis in gastritis and ascertain as to whether there is an increase or decrease of acid. I have seen cases in which I could make no differential diagnosis, and I have come to the conclusion in the past two years that every case of suspected ulcer that comes for diagnosis should not only be tested in the usual way, but should have the gastric contents tested for occult blood. I believe it saves considerable time in differential diagnosis.

In that little circle that might be drawn from the ensiform cartilage and embracing the pylorus, a segment of the stomach, duodenum and gall-bladder, we have an area that will test the diagnostic ability of almost any man except possibly some of the brilliant minds of surgery and internal medicine. I have found, however, that sometimes we may lift the veil of obscurity by removing some of the questions. For instance, in every case in which you make a certain diagnosis of disease of the stomach you have gotten one step further. There are other steps that we could make that would remove other conditions and possibly by elimination we can arrive at the true diagnosis. We can at least be helped and for that reason I would not give up the test. Do all that Dr. Moren has said and make the analysis in addition. Do nothing harmful but use every means in your power to make

a diagnosis of the condition. In fact I think the general practitioner should more frequently make these tests rather than less frequently. I think it would give him a better technique. It would make him think more of his cases, he would study his cases more closely and in that way he would get in better touch with them, understand them better and get a grasp of their condition that could not be obtained otherwise.

I would like to know how one would differentiate between an organic acidity that which arises from the presence of fungi from an excessive secretion of hydrochloric acid, if he does not resort to the use of the stomach tube? How differentiate without his searching the stomach contents those conditions of acute and chronic hypersecretion of gastric juice? And it is for this reason that I am at a loss to understand why every man in general practice should not be ready to consistently try these tests and make them in each and every case almost a routine practice, employing not alone symptomatology, but physical examination supplemented by every known chemical or microscopical examination to reach his conclusions.

DR. MOREN (*closing*): I am rather surprised that my paper did not bring out further discussions. I walked into a bigger pond than I thought when Dr. Coleman suggested this subject, and when I got in the middle of the pond I had to fight to get to shore. I believed that you boys would ask questions on some of the points in which you were interested, but you have left me without fodder and I must go home.

In answer to Dr. Pope, I do not know why he should think that I am not in favor of using the test meal. I believe we should use it, but one thing I wanted to impress on you boys was that indigestion is not such a complicated thing, and if you will only think of the symptoms, you could handle them just as well as anybody else. So it does not require a special man on these disorders if you would only study and think. If we know what we ought to do and do what we ought to do, we would do better work. We make mistakes right along because we do not do what we ought to do.

One advice that I would suggest to you is to study special works on this subject instead of the text books.

In regard to Dr. Wathen's point of differential diagnosis, as I said in the essay given me, the symptoms and I will make a diagnosis, but if the symptoms are not there I cannot make that patient have ulcer of the stomach or duodenal ulcer. I once

read a paper by a distinguished Englishman, a surgeon, on duodenal ulcers, and I said I have allowed a lot of cases of duodenal ulcers to get by. If they ever had duodenal ulcer a number of them are well.

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## OUR NEGLECTED INSANE.

BY T. P. SATTERWHITE, M. D.,  
LOUISVILLE, KY.

*Gentlemen of the Clinical Society :*

In selecting a subject for to-night I know of no better one than to revive your sympathy and co-operation for the neglected insane. Dr. W. H. Miller, several weeks ago in an address delivered before the Women's Club of this city, paid a beautiful tribute to the medical profession, stating that in all the endeavors to better the human race they were in the lead, and more often the originator of the movement notwithstanding it was against their pecuniary interest. The sentiment expressed on that occasion elicited the approbation of his audience. When the National Charity Organization met here some weeks ago, Dr. Geo. P. Sprague, of Lexington, Ky., who is an alienist that stands high in his profession, read a most valuable paper on the treatment of the insane, which was published in the *Courier-Journal*.

I determined, when an occasion offered, to do my part in keeping the subject of the neglected insane before the public. We are startled too often by newspaper publications of abuses that occur at one or another of our State institutions for the insane. Only a few months since death was the result of rough handling.

It is a pity the public are not constantly reminded how the insane are treated by the politicians, both political parties are alike in this respect, each turn out good men employed in these institutions to reward their political friends. The poor unfortunate patients are never considered in their appointments. We should have competent men at the head of every insane asylum who has made

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\* Read before the Louisville Clinical Society, Dec. 18, 1906.

psychology a study, and induce medical men to come in as assistants and make mental disease a specialty.

Insanity is no longer looked upon from which there is no escape and for which there is no prevention or remedy; no longer is it deemed necessary to incarcerate such patients and condemn them to a life of helplessness, isolation and inactivity. Far more is to be gained by just the reverse. There is in all our asylums a large physical force going to waste; to utilize this force from a physiological and therapeutic stand-point, to say nothing of the economic one, is being utilized in all progressive institutions. Their enervating tendencies of idleness of body and mind calls for employment and diversion, and all institutions which furnish these can refer to a list of patients who have recovered and were regarded as incurable. Non-restraint and employment go hand in hand; this will change the whole atmosphere of any asylum; dangerous and virulent patients become quiet and industrious and useful. There is nothing more certain than that idleness is destructive of both mental and physical health. Mental deterioration and helplessness are conditions which call for extraordinary means for the care of the insane, such as are not required in institutions for the ordinary sick and injured.

The evolution in asylum management in recent years has been far reaching. What asylum in our State is developing clinical and laboratory methods of research in the domain of morbid psychology? Every alienist recognizes its importance in the care, treatment and cure of the insane. I tried, when a Commissioner at the Central Kentucky Asylum, to inaugurate a system of nursing which would eliminate cruelty that is sometimes inflicted on the unfortunate patient. The attendants have no incentive to perform this duty other than their small monthly pay. The certificate plan should be inaugurated which, if strictly carried out in all its details, has proven very beneficial. The most efficient means of preventing cruelty to patients is to have two female attendants in each male ward assisted by an orderly. We all know the calming influence



of women in a sick-room; their gentleness and persuasion is what insane patients require. It is rare that an insane patient cannot be managed by kindness and gentleness. No orderly would, in the presence of women, handle a patient roughly. It is harshness that arouses the beligerency of the insane. There are many attendants that are totally unsuited for a nurse at an insane asylum; the position is a very difficult and trying one to fill.

It certainly seems only simple justice that the medical profession and the insane should not longer be deprived of the knowledge to be gained by scientific investigation and the most approved methods of lessening restraint. All asylum authorities should be required to glean all the knowledge that careful study and investigation can accumulate, and publish the same to the medical world, thereby in the course of time lessen the great sorrow of the world.

In closing, allow me to urge upon your attention and try to get established at each asylum in the State a detention ward isolated sufficiently far from the asylum not to be identified with it. The detention hospital in cities is the jail. We have hospitals for broken bones and fevers, but when the most important organ of the body—the brain—is diseased the emergency hospital is the jail. An early and speedy treatment is of paramount importance in all acute cases of insanity. Surely nothing can be worse for an insane person than police officials and prison walls, and in addition it will do away with the absurd practice of summoning doctors to go to jail to determine the sanity of a criminal who is under sentence of death, and his only hope of escaping the gallows is to feign insanity. The poor criminal may be insane from long confinement in jail and brooding over the crime, but no doctor can tell with any degree of certainty by seeing the man a few times; he should be under observation of competent men who have given mental diseases a life study. It does not speak well for 'our State to boast of their being among the first to care for the insane when they are so far in the rear in the enlightened management of them.

## DISCUSSION.

DR. MARSHALL: The question of the character of people in the institution is one that has interested me a great deal. I think that the sending of patients to institutions is a dangerous thing. I think that much harm is done by the character of the people in the institutions. I think that these rest cures have done infinitely more harm than good to the people who have been sent to them. The morals of the patients is lowered and they lose their independence. And when these go to the places for the insane, of course those institutions are under the politicians and they are the worst you can imagine for these people. The only excuse for them is that there is no other place to put them and take care of them. I do not believe that that is good for the patient. It is only good for those who cannot take care of them. You cannot take care of a violent person in a private family. You must put them somewhere and if a person has no means to go to a private institution he must be sent to a State institution, and that is the only excuse for it. It is little more than a jail. I think that many of the institutions that are private are of such a character that they are carried on in a slipshod way.

One other question that I would like to mention is that we may send a person to one of these institutions who is only in a nervous condition, he is not really insane; they go there and with rest and the proper care they get better. Then the question comes up, can you get them away? In most institutions they care very little about the patients going away. They want the patients, especially in those institutions nearly vacant; they want to hold onto them. When you go to see those people and see their surroundings, a person that realizes his condition and is almost as well as any of us, and who must daily sit at the table with people with various troubles and who talk them over all the time, his lot is such that it is enough to make him crazy.

DR. WEIDNER: We appreciate a favor of this sort. Dr. Satterwhite has taken much interest in this subject, but unfortunately all the political pull he has had has not done much to improve this condition. I do not think it is right to put the blame on the institutions as Dr. Marshall seems to do. I think these institutions are fully justified. We need them and cannot do without them. An institution of this sort is necessary; it ought to be a hospital for the insane and it ought to be a place where they are taken care of according to the best and most

modern methods of treatment. We need them for persons not able to pay their way in private institutions.

I am not posted about the home institutions very much. I know that this year we have seen unfortunate things reported in the papers. I have, however, a good deal of sympathy for the attendants of these patients. We know that these patients ought to be managed with kindness. Some may be managed by kindness and others may be treated with all the kindness and still attack the attendant, and in self-defense he may do something that he would not do otherwise.

So far as the previous report made by Dr. Satterwhite there has been no progress made. The pathological studies that would result in so much good ought to be made. There ought to be a pathological laboratory connected with these institutions supervised by a competent histologist and pathologist. It is not done and all of the interesting material is allowed to go to waste. Gross anatomic lesions, such as tumors of the brain, hemorrhages, etc., are usually discovered at the autopsies, but the fine details are practically nil. The profession ought to work hard in this direction and not leave this in the hands of the politicians; and they can unite and do it.

DR. CHEATHAM: The Doctor's paper is very timely and I am glad to have heard it.

DR. IRWIN: Dr. Satterwhite is a very suitable man to write such a paper in view of the fact that he has had experience in the management of the insane, pro and con. When we come to consider the question of insanity we find that these patients are in the most deplorable condition. The vast majority of these cases of insanity show no gross lesions of the brain whatever. Pathological phenomena tell very little. After they become insane many of them live a long time and atrophic changes take place in the brain during the period of insanity. Some cases are supposed to get well. But how frequently do we hear of relapses.

Those who are in the institutions want to get out and those who are outside have to be put in. We should bear these facts in mind. The State should provide for these unfortunate creatures or the country at large should do it. They should be cared for with all the gentleness that can be brought to bear in such cases and where they are violent and there is danger of them doing harm to other patients they should be restrained. The attendant who is in charge of the insane is not always an intelligent

person, consequently there are two sides of this question between the insane and the attendants. The first is that the State has not applied the proper means to protect the attendant from the violence of the insane and in self-defense the attendant resorts to violence to protect himself from being killed.

When a medical student in Philadelphia I was at Blockley Hospital. They had six thousand insane there. One day a trusty who had been insane and had almost recovered, went down to the kitchen and he carried with him concealed beneath his coat a bar of iron that he had taken out of the window, and as he believed that he was a messenger sent by Jesus Christ to dispatch the cooks, the first cook he came upon he killed, and the second cook he killed, and the third one jumped into the oven and was almost roasted to death in the effort to save his life. In another instance a trusty found one of the attendants stooping over washing out the bottom of a bath tub. Another attendant saw the trusty at a distance with a bar of iron in his hand taking aim at the attendants head and he asked him what he was going to do. He said that he was a messenger sent by Jesus Christ to send people to eternity and that the man had only one minute longer to live. Were not those attendants right in knocking that insane man down instead of being killed by him? I am on the side of the attendants in such cases. If any of us were about to be killed by an insane person would we not defend ourselves.

We hear talk of the wonderful cures of the insane, but no man who has been insane can occupy an important place. The thing to do is to keep insane people in the asylum. Give them fresh air, wholesome food and good clothing, and make them as far as possible self-sustaining. We know that many cases are traceable to heredity, and they should not be allowed to beget children and afflict humanity with their posterity.

DR. MORRIS: I think this is a question of vital importance. The question of insanity is certainly one of the most vital that we can discuss. It is one in which we are all directly interested. It is an affliction that may befall any of us or our families, therefore, it is of vital importance to us all. I do not think it can be discussed too much.

As to the propriety of the insane asylum I think there can be no question. I think it is one of the most important institutions of the country; it is the most needed of any institution. I do not think there is any question of its propriety at all. The ques-

tion is the proper conduct of these institutions, and I do not believe that it is political affairs that prevent their being properly conducted. I have never thought that. I believe that the whole trouble is the placing of men there who are not conscientious in doing their whole duty. I think with or without politics conscientious men can be placed there and kept there. I think the conscientious man will take the matter to heart and do his whole duty. I do not believe it is a question of the use of drugs in the insane so much as it is a question of kindness and proper treatment in the general way to them.

The insane man or woman is the most helpless creature on the face of the earth, and my observation has been that with kindness these people can be easily managed. It is absolutely necessary to have such institutions to take charge of these people where they can be maintained and protected. They should not be called insane asylums.

I have always doubted whether epileptics should go to insane asylums. Special provision should be made for them elsewhere.

DR. W. H. WATHEN : I think that to bring out the best points two persons should not attempt to discuss the paper at the same time, and nothing is gained to constant interruptions by the questions asked Dr. Morris. I do not think that it brings out the salient points that might be brought out otherwise.

As to the question of an insane person being a helpless person, we do not mean by that he is physically helpless. He may be strong and vigorous, but if he is really an insane man he is certainly a very helpless man. Again, while he may possess strong qualities of mind in some directions he is not insane unless his mind is diseased in certain particulars, and he is often liable to do the most unexpected thing. The fact that he goes to his dinner when the bell rings and does something when told to do it is not evidence that he is not comparatively mentally helpless, because the dog and the cat and various animals do that, and it is certainly the consensus of opinion the world over by the greatest thinkers that none of these animals have the power to reason possessed by man. The only reasoning animal is the human being, therefore, the question that these people can do these things has no bearing whatever upon their being the most helpless. They are certainly capable of doing a great many erratic things and committing physical violence in the way of injuries to themselves or others.

There is no question of the necessity of places to restrain



these people and to care for them with the best possible attention. The best results, however, have not been obtained by medicines but by simple intelligent custodial care.

I agree with Dr. Morris fully that an epileptic should not go to a lunatic asylum. And they would not have to go if the State did its duty and provided a place for epileptics. They form in a degree an entirely different class of patients and require an entirely different treatment, and should be separately and differently cared for, and it is a shame to the State of Kentucky and other States of the country that they are not cared for as they should be.

DR. SAMUEL: While I do not treat the insane, and while I am not an authority on insanity, I am sure that it has not been defined here to-night.

In Blockley Asylum, mentioned by Dr. Irwin, I served three months. Though I did not hear Dr. Satterwhite's paper I am familiar with his views on the subject and his views of colonizing the epileptics. I think when the epileptic reaches a certain stage he is the most dangerous person we have to deal with. Dr. Satterwhite will bear me out there. The most dangerous person to deal with in the insane asylum is the epileptic.

Like Dr. Irwin I am in sympathy with the attendant. I know of the case he mentions and know it to be true. It is history at the University of Pennsylvania. I am sure that kindness will control the ordinary insane. This is going to lead into a discussion of the various insanities, the functional disorders and the organic conditions. Everybody who has practiced in the wards of an insane asylum knows this, that old demented cases must be restrained for four or five days. It is a well known fact that when a man has general paralysis of the insane he is the most dangerous lunatic that we have to deal with. He must be confined in a padded cell until that insane fit has passed away and medicines are used for this kind of patients.

The question of insanity is a difficult one. Read over the English authorities on the subject and you will find a sad commentary upon the asylum. It is a jail or a mad house.

The asylum is an institution that is absolutely necessary. It should be removed from politics. A commission should take hold of it and when a superintendent is placed in charge he should be kept there unless removed for valid reason. He should have complete control over the attendants. Every attendant in our asylums knows that he has as much power as the superin-

tendent. A man who has had some influence with the Governor put him there.

I believe as Dr. Morris that the insane should be taken care of with as much kindness and gentleness as possible. Dr. Satterwhite knows that a policeman might knock down an insane man and take him to jail and swear that he was drunk with whiskey. We have no place here to detain cases of acute mania that may be well in a few hours. There is quite a difference between these cases and the cases Dr. Irwin spoke of.

DR. BARBOUR : I spent a year as a physician in the asylum at Lexington, Ky., and the conditions did not obtain there that Dr. Samuel has voiced forth. The superintendent had control of the attendants and whenever he said go they went, and the Governor had nothing to do with them at all. I suppose since the new board of control of asylums has had charge that politics has taken hold of them and the superintendent is less a superintendent than he used to be.

Anyone who has been in an asylum and knows anything about the dependent position in which the insane are placed in the hands of the attendants will be pleased with anything that takes these positions out of politics.

I think that any man who works with the people in an asylum feels that they are so many children. You know that when they go out in the yard you have to get their coat or cloak for them, and you have to see that they do not run away. It is just the kind of care that has to be given a child. And those who have been in an asylum as I have, have felt that way. The patients have no more sense or intelligence about themselves than children.

They appeal to that protective instinct that is inherent in us all. And God forbid that the time shall ever come when bad and inferior Doctors are appointed to the charge of these unfortunates and cruel and inhuman attendants shall have their positions through political influence.

DR. W. ED. GRANT : We have a few minutes yet. This is certainly an interesting paper and it brought forth a rather interesting discussion.

The object of the paper seems to be the better management of the asylums and the better management of the insane and selecting those insane people who may be benefited by giving them employment and putting them in a class by themselves. Of course there are many that could not be employed, but many

would be benefited by being employed and the State by having their services.

I am glad that the Doctor wrote this paper and I am sure that it will bring forth good fruit.

DR. WILLMOTH : I did not care to take part in the discussion, but it has reached such a wide range and I think that there are two or three points that the profession could remedy, at least it is in their power, otherwise they cannot be remedied. I am in favor of a man being placed as superintendent or a physician in an asylum after he has prepared himself. Like all the rest of you I believe it is a mistake to have the asylums under the control of politicians. We know that any man who has any influence can be appointed to an asylum position whether he knows anything about the duties of the position or not, and he remains there for a period of four years and is replaced by a man equal as incompetent. This can be remedied by the profession if they will have the legislature pass a law so that the superintendent should be placed there only after he has passed an examination before a competent board. This question of the board, it is not proper for me to say how it should be selected, but it should be a competent one that would pass on these physicians to ascertain whether they were competent to take the place, and as Dr. Samuel said to remain there a life time and be paid a salary to justify them to remain there unless removed for incompetency. The superintendent's word should be final with those under his charge ; he should have absolute control.

There is another question in regard to the asylums that is an important one, that is the elimination of the word "asylum." All of us would hesitate, though not prepared to keep our loved ones at home, to place them in an asylum. It is a fact that people all over the State hear so much about the asylum that you only have to mention the word and you find that a prejudice exists against the institution, and if we could get rid of the word we would eliminate a great deal of prejudice that exists.

As to the question in regard to the epileptics and the other forms of insanity, while I believe they should be colonized and should be separated, I believe this could be fairly done in the institutions to-day. They could be cared for in a separate part of the building and this could be done at a less expense than in a separate institution.

Another question was raised in regard to the attendants. I must say that I am on the side of the attendant. While many

of the people under the charge of the attendant are like children, some of them become violent and attack the attendant. "Self-preservation is nature's first law" and any of us would throw a man down if he was overpowering us and about to kill us. Some of them have to be controlled by force.

I believe that the attendants should be carefully selected. They should be placed there on trial for a length of time and should be under the observation of the superintendent to determine whether they care for the patients as they should.

DR. SATTERWHITE (*closing*): My paper was designed more particularly to draw the attention of the profession to the neglect of the asylums of the State. The object of the institutions of the State is for the cure and the betterment of the insane, but there is nobody that knows anything about these institutions that can say that they are conducted for the benefit of the insane.

There are not in any of the institutions any investigations carried on scientific research. Where institutional investigations are conducted the cause of it may take years to discover. The question will be solved little by little if the authorities are competent to hold postmortems and have pathological laboratories and make reports to the medical profession of the outside world. With a little here and there we might in the course of time discover something. But as it is now the asylums are spending half million dollars and all this expenditure allowed to go to waste.

Further, I want to say this, that so far as the statement of Dr. Irwin and Dr. Samuel in regard to the danger to the attendants is concerned, it is wonderfully magnified.

The private asylums are worse than the State institutions. State institutions throughout the world are recognized as the best places for the insane people. You would not want your son, your wife or your daughter to go to an asylum and sit with the other insane and brood over their imaginary troubles. Medicines do not cure insanity. Occupation and diversion do them good. We built a forty-five thousand dollar house out at Lakeland for the entertainment and occupation of the insane. They were never used by the patients as contemplated.

There is not any form of labor better than work on a farm. Of course outside labor is better than labor in doors. There is no reason why asylums cannot lessen the cost of maintenance by the employment of the insane, and therapeutically the value of labor is recognized all over the country by the alienists.

## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, NOVEMBER 6, 1906.

#### EXHIBITION OF CLINICAL CASES.

DR. SAMUEL: I have a young boy here who was referred to me for an opinion some two or three weeks ago. Through the courtesy of Dr. Hazlewood, of New Albany, I present him for your consideration. Both Dr. Hazlewood and I have tried to get a definite clinical history and have obtained certain facts. The case presents such a perfect clinical history that it will suffice for discussion.

The points obtained from the boy in talking with him are as follows: He will soon be fifteen years of age. His mother is living; his father died of inflammation of the bowels. He has two brothers and a sister who are very healthy. The mother is a healthy woman. The boy a year and a half ago noticed this tumor or rather he noticed something in the mouth pushing the tongue up into the roof of the mouth interfering with the movements of the tongue. He gives a history of falling, a piece of wire catching him in the neck and he rather thinks the injury has some connection with the production of this injury.

DR. SATTERWHITE: I am rather inclined to think that it is some cystic trouble; whether of the submaxillary gland or not I cannot say.

DR. CHEATHAM: It feels to me like a cyst. I would like to see Dr. Samuel aspirate it.

DR. SAMUEL: I am going to remove it.

DR. J. R. WATHEN: I have nothing to say except to ask Dr. Samuel in closing to state whether he considers it sarcoma.

DR. SAMUEL: I am rather sorry that you gentlemen have not expressed your opinion of it.

DR. WEIDNER: From the rapid development—that is what I would consider rapid development—from the feel and from the extension of the trouble I must say that I consider it sarcomatous more than anything else. I do not think it is a tuberculous trouble. There is no tuberculous trouble of the glands of the neck. I find no evidences of any infection from without or within like we find in actinomycosis; we can exclude that. There is nothing about the gums or mouth and I believe it is sarcoma.



DR. SAMUEL (*closing*): I have studied the case for about a month. Tumors of the tongue might be at once excluded from our diagnosis. There are three conditions that might be considered here if I am correct. First sarcoma, next a dermoid cyst and the other is the so-called serous cyst of the mouth.

In the first place he presents a typical clinical picture to follow the authorities on this subject of a dermoid cyst. He has a double chin, the mouth hangs down and the saliva dribbles from it. An important point in this boy's case is that when the tongue is pressed down the tumor is prominent in front. The age of the boy will have something to do with the diagnosis of the tumor. Then the duration of growth, it has existed for a year and a half; the boy's condition is perfectly healthy. I do not believe that it is sarcoma. Sarcoma in this region is so rare that there is only one reported case that it has been my good fortune to run across. The tumor is not painful. In sarcoma of the tongue it is not long until ulceration occurs and a crater-like ulcer forms. My diagnosis is that this is a dermoid cyst. This is typical of all cases of dermoids reported. Fifty cases have been reported by one German; four cases in children of four years of age; thirty-seven in persons between the ages of fifteen and twenty-five, and the remaining cases were between the ages of twenty-five and fifty. They are usually of slow growth and do not show until puberty is about reached and then grow very rapidly. They are in the center and beneath the tongue, and they grow in the embryonal cleft where this is situated. There are three situations where they occur in this region, the sublingual, submental and the submaxillary, of which variety this is.

To come back again, the so-called cysts that occur in the lymph glands along the dorsum of the tongue occur just as ranula do, but nobody considers this a ranula which is due to an occlusion of the duct of the sublingual gland. All of these tumors can be excluded. Besides this note the age of the patient and the duration and situation of the tumor and the history of the case; also consider the facial expression. The tumor has the physical characteristics of the dermoid cysts. It is a soft doughy tumor and if pressed on it is tender. If you will notice by holding the finger on it for a while there is a pitting which is characteristic of a dermoid cyst. These cysts are rather rare and are due to an inclusion of the embryonal clefts between the second and third arches. They are sometimes connected with the hyoid bone and sometimes with the lower jaw. This cyst is readily re-

movable. They occur in the middle of the tongue, and the patient complains of the tongue being lifted up. He cannot get food into the mouth nor can he swallow. It seems hard to get the pharynx to grasp the food. I am going to remove this growth in a few days.

DR. WEIDNER : What is the explanation of these glandular masses along the chin?

DR. SAMUEL : I think that is a part of the growth. I do not think there are any enlarged glands unless the sublingual glands are slightly enlarged. I think all of the mass is a tumor itself. The tumor in my opinion will be very easily removed.

There are one or two other tumors that might be located here, such as adenomata. Adenomata may occur in this situation. As you all know—the duct empties into a foramen there. I have forgotten the name of the foramen; it must be the foramen cæcum. There are two little glands which are the remains of the — gland and in these two glands adenomata frequently develop.

This may be a sarcomatous tumor. I doubt that it is from the length of time it has been growing, from the boy's general health and because he is at an age when dermoids occur most frequently, sixty per cent between the ages of twelve and twenty. In one of the works I consulted there is a drawing of these tumors which is almost perfect to my mind and shows the clinical and anatomical characteristics of this tumor.

I do not regard the traumatism as having any connection with the growth. I think the tumor is congenital. Of course if it is a dermoid cyst it is congenital. I know between the history of an injury and a sarcoma there is a decided clinical connection, and it is so regarded by the authorities on this subject, particularly of bone.

#### EXHIBITION OF PATHOLOGIC SPECIMENS.

DR. W. H. WATHEN : Four days ago I was consulted by a young married woman 22 years of age, mother of no children, from Indiana, with a neoplasm in the left breast above the nipple, the lower border extending down to the margin of the areola. It could be perfectly outlined. There was no enlargement that could be determined in the glandular structures of the axillary space. She was in perfect health, pregnant two months, married one year. She wanted the tumor removed. It was removed by an incision from above directed toward the nipple and was easily enucleated. It seems to lie on the gland without any firm connection

with it. The wound was carefully sutured and the woman returned home in the afternoon.

My diagnosis would be an adenoma. It may be shown when it is examined microscopically that it is an adenofibroma, or it may be an adenocarcinoma, because the physical appearance in the early stage of the three might be practically the same, and this is at an age of life when all of these three varieties develop.

My especial purpose in exhibiting the tumor is simply to emphasize the fact that I believe in removing from the breast every well marked neoplasm that we find in the earliest stages, because it is then practically devoid of danger and it may prevent the final development of malignant conditions that destroy the life of the patient.

In this case there was no necessity for making any further operation than the removal of the tumor because of the uncertainty of the diagnosis; it is not carcinomatous, and if sarcomatous the glandular structures are usually not involved until the late stages of the diseases and then probably invariably through the veins.

The statistics of all neoplasms of the breast shows that whether malignant at the beginning or not that finally nearly all of them if left alone develop into malignancy.

DR. SAMUEL: I agree with Dr. Wathen in everything he said and I am sure that it is more than likely that he will find that this is adenoma, one of the common tumors of the breast, and as he has said it may be an adeno-carcinoma or it may be of the other variety. It is well known that adenomata form the basis of malignancy, and I believe they should be removed; and I agree with him that he has probably done the proper operation, one less mutilating than the complete operation. It is a case that should be watched with care and if recurrence occurs it can be seen at an early date, and an amputation and complete ablation of the axillary space should be done.

It has been my regret that I have had several cases where I removed an adenoma which was perfectly encapsulated, having pushed the glandular structures to one side. The capsule was incised and the tumor removed and the capsule peeled from the breast and the growths have returned, and in one case a tumor in the opposite breast with malignancy. Before she died she developed insanity which does develop in these cases. I regretted that I did not do a complete operation. I feel that I was justified in one thing, and that was that before she left the infirmary I noticed this mental aberration.

I have nothing further to say because the Doctor has said that all tumors of the breast should be removed when found.

DR. FLEXNER: I would like to ask Dr. Wathen if the microscopical examination showed an adeno-carcinoma what would he do?

DR. W. H. WATHEN: The tumor will be examined microscopically and if it is found to be an adenoma I shall do nothing but watch the patient.

I want to make it clear that I believe that this is an adenoma because of its size, as they occur in the breast usually from the size of a hazelnut up to a hen's egg, and because of its loose connection with the surrounding structures. It had had no effect whatever upon the system. I am not so well satisfied, however, in my diagnosis as to exclude further examination, and I have requested Dr. Allen to make a thorough microscopical examination to find out what it is. If it develops that he finds it to be a sarcoma the case must be watched closely, and if there is a recurrence a thorough operation should be done.

The necessity for dissecting out the glands in the axilla is not so important in sarcoma as in carcinoma of the breast.

The case that Dr. Samuel reports of adenoma of the breast that returned was an adenoma that had developed into a sarcomatous condition before he operated because adenomata are found rarely of that size, but they develop in malignant growths of any size.

DR. SAMUEL: The microscopical appearance showed it to be an adenoma.

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## LOUISVILLE MEDICAL AND SURGICAL SOCIETY, NOVEMBER 19, 1906.

### PRESENTATION OF PATHOLOGICAL SPECIMENS.

DR. J. R. WATHEN: This first specimen I present is a prostate which I removed by the suprapubic method. I present it for one reason more than anything else. It is unique in this respect.

About two years ago I presented, with a series of other specimens, the prostate of a man about 74 years of age, which I removed by the perineal method. Now a son a few days ago presented himself to me who is also rather an old man—fifty-seven—with an enlarged prostate and I have this specimen. The two specimens were removed by the radical operation of prostatectomy and both patients are living and doing well.

This next specimen which I have is an appendix removed about three weeks ago from a patient who was about three and a half or four months pregnant. It was gangrenous and perforation had almost taken place when it was removed. The operation did not interfere with the pregnancy and she is doing well.

The next specimens are gall-stones. The patient was referred to me by Dr. Satterwhite. The diagnosis in the case was of peculiar interest. It was first suspected that the patient had kidney stone and I was called into the case for kidney-stones, but we made a diagnosis later of gall-stones. The symptoms in many respects resembled the symptoms from kidney-stone. The pain was more in the region of the kidney and radiated downward along the ureter.

I operated and removed the gall-bladder and since then she has been in splendid condition. There was a little difficulty in removing some of the stones. Some were as low down as the common duct which made them difficult of removal.

In order to avoid leaving any stones in this case I also examined the common duct and the pancreatic portion of it to the diverticulum of vater. This is considered difficult, but with the new technique it is easily done. I refer to the Robson method of placing a sand bag under the back and dislocating the liver, and then by placing gauze on the liver you can almost bring it out of the abdomen, and then by dividing the folds of peritoneum between the stomach and the duodenum then going through both layers of the lesser peritoneal sac, the pancreas is easily exposed.

DR. HENDON: I was particularly interested in the specimens of the prostate which Dr. Wathen was kind enough to exhibit to us to-night on account of the recent experience which I have had along that line.

We are all aware of the extensive discussion that is in progress in scientific circles with regard to the best route for approaching the prostate gland, and brought out in the exhibition of a specimen by me at the Academy of Medicine, it seems that the conclusion is forced upon us that these two methods of operating are not to be put down as rivals for our favor but rather looked upon as allies toward the accomplishment of the same end.

Another important point is that in some cases, on account of the situation of the gland, it will be more readily removed by the suprapubic method. Other cases will be more readily removed by the perineal route. Some operators can remove the prostate better by the perineal than by the suprapubic method. Other cases



will be more readily removed by the perineal route. Some operators can remove the prostate better by the perineal than by the suprapubic route, so that the situation of the gland and the habits of the operator are two factors that ought to determine a surgeon in deciding which route he will employ.

It is urged in favor of the perineal route that it favors drainage. In recent experience we have found that the subject of drainage does not hold the importance that has heretofore been accorded to it. When we stop to consider that the object of drainage is purely for the removal of hemorrhage or the products of hemorrhage we will readily see that if we have little hemorrhage we need very little drainage. Of course an exception to that rule would be found in a putrid and highly septic bladder.

Another point too is that we know that if we make the two openings in the bladder, the perineal and the suprapubic, the perineal will almost always close before the suprapubic. So I believe that settles the question as to the best route and the best method of approach.

The case I presented demanded operative interference on account of the intense irritation and frequent urination. The gland was not near so large as these specimens presented by Dr. Wathen.

I want to recommend the point made by Dr. Wathen in reference to the technique in liver operations. I find that it is an important gain to have the liver lifted up by a sand bag placed beneath the patient. Lilienthal, of New York, has devised a table by means of which we can lift the thorax of the patient to almost any degree desired, and that is a point that simplifies the operation to a very great extent.

DR. J. R. WATHEN (*closing*): I have very little to add to the report of specimens made. The point that I wished to make in presenting the specimens was that the two prostates were removed from members of the same family—father and son—and that one prostate should be removed by the perineal method and another by the suprapubic. In the first case the prostate was in the perineum, low down, and I thought the perineal route the better one. The other specimen presented in the bladder and when the bladder was opened, and the prostate pushed up from below, it filled the bladder. It was of the soft adenomatous type that came out easily. I had a good deal of hemorrhage in this case. The specimen is considerably shrunk now. It was much larger when removed. I do not see how the point can be brought out better than it was by Dr. Hendon as to which method we should take as the choice method. I think also that the personal equation of the operator should be taken into consideration. One operator can do the work better one way and another operator can do it better another way. That is the old story of the vaginal and abdominal hysterectomy. It holds good in all surgery, and I believe every man should take that method by which he can get along best.

# THE American Practitioner and News.

“NEC TENUI PENNĀ,”

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F. W. SAMUEL, A. M., M. D.,	} EDITORS.	O. P. NUCKOLS, M.D., Ph. D.
SAMUEL B. HAYS, M. D.,		MANAGING EDITOR.

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## Editorial.

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1907. Another year has passed into history, and we enter upon the work of the new year with new hopes and new ambitions. To our many subscribers, advertisers and friends, we toss our hat high in the air, and invoke the most generous benedictions of a boundless and gracious providence. We cherish the hope that all our friends have enjoyed a most happy and prosperous year, and to-day stand at the horizon of the new year with a bright and smiling future spread out before them. The year that has just closed has been one of universal prosperity, and has been crowned with many advances along all lines of medical research and investigation; and we predict that before the close of 1907 there will still be greater achievements in the healing art that will tend to lessen the perils of disease, and relieve suffering humanity of many an hour of pain. It should be the pride of every honest and courageous physician, to enter upon the work of another year with renewed zeal and increased vigor, not alone in the daily routine of his work, but in persistent effort to improve upon present methods and present results. Looking backward; the time is not far distant when cholera, smallpox, yellow fever and diptheria hung

over our land as a cloud of death, leaving crepe upon the lintel of almost every door they entered, but to-day the medical profession feels almost ready to return the sword to its scabbard and declare the victory won. Looking forward, may we dare the hope that, before the close of another year, there may be added to the list the one great plague that sweeps away our population by its thousands every month in the year. The management and treatment of tuberculosis should be a matter of the most vital interest to every practising physician, and in the light of recent developments, no physician can stand excused when he relegates his tubercular cases to the list of incurables. His skill may at times be baffled, and his most careful and painstaking management of a given case may only be rewarded by death, but the gratitude of loving friends and the self consciousness that must come from a duty well performed will fully compensate him, and we confidently believe that the time is not far distant when the positive and absolute cure of a large per cent. of tubercular cases will be another great medical achievement.

“Let us then be up and doing,  
With a heart for every fate;  
Still achieving, still pursuing,  
Learn to labor and to wait. —(N.)

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## THE AMERICAN PRACTITIONER AND NEWS.

We hope at this time a few words in behalf of the AMERICAN PRACTITIONER AND NEWS will be cheerfully and gratefully received by our readers. We of course feel a pardonable pride in our journal, and seek to fill a place and render a service to the medical profession. The work of the past year has been quite pleasant and in the main satisfactory. It is not in strict accord with the progressive age that we should be content with the work of the present but look to better things. Under the management of the past few years our journal has grown and prospered, and we have entered the new year with but few changes. It has been the policy of the AMERICAN PRAC-

TITIONER AND NEWS to adhere to a course that we deemed in strict harmony with the ethics of the profession, and we take this opportunity of acknowledging our grateful appreciation to our friends for their liberal patronage and encouragement.

For the year 1907 we expect to be able to present to our readers every month an article of special interest to the profession, from men of authority on the subject, presented each month. Further, we invite the liberal use of our columns by our readers, and will be glad to receive original articles from any one who has something of interest to the general practitioner of medicine. Let us have your papers; help us to help others. (N.)

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#### READ OUR ADVERTISING PAGES.

In our advertising pages will be found many of the well known pharmaceutical preparations, surgical appliances, etc. Many of our advertisers have been with us for years, some of them commencing with the very beginning of their business, and continuing from year to year. They have grown and prospered, and we feel that they have not only had ethical and meritorious preparations, but that our advertising pages has afforded a helpful means of presenting them to the medical profession. We welcome to the ranks of our old friends the following new ones, whose advertisement will be found in this issue, all of whom we would ask the most careful consideration from our readers. Katharmon Chemical Co., Quigley Chemical Co., Peter-Neat-Richardson Drug Co, James Alkaloidal Co., and Anita Springs Water Company. (N.)

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#### NOTES.

We wish to thank the Denver Chemical Manufacturing Co., for a very pretty picture received at this office, Christmas day. Dr. Baketel shows as good judgment in selecting a subject as he does in the manufacture of his excellent product, Antiphlogistine. This article in the hands of "the Antiphlogistine Girl" is "effective" as well as "pleasing" both in picture, and in medicine.

Your attention is called to the fact that the name of the *Journal of the Association of Military Surgeons* was changed with the issue for January, 1907, to "*The Military Surgeon*," retaining the old name as a subsidiary title. The successful career of the journal during the past six years, as the pioneer military journal in the English language, has been remarkable. It entered upon a field hitherto unoccupied and unexplored and has brought military medical literature to the highest standard. We extend best wishes to "*The Military Surgeon*."

We desire to call your attention to the changes which have been made in the "*American Journal of Dermatology and Genito-Urinary Diseases*," and they are of such a nature as cannot fail to commend them to your approval and good will.

The size of the journal has been enlarged, the number of pages of reading matter has been increased, and all this without making any change in the subscription price.

It numbers among the contributors to its pages the best and most celebrated dermatologists, syphilologists and genito-urinary surgeons who write. Whatever of their's is printed is well worth reading, and in addition to this, there has been added several departments which will add increased interest and usefulness to the journal.

#### IMPORTANT ADVANCE STEP BY THE STATE BOARD OF HEALTH.

*To the Medical Profession and People of Kentucky:*—The infamous practice of criminal abortion—infantile murder, to speak plainly—dangerous to the health and lives of women to an extent not generally realized, and a constant encouragement to immorality, has become so common in recent years, even with married women in the higher walks of life, often church members and otherwise respectable, that the General Assembly has made it the solemn duty of the Board to revoke the license to practice of any physician proven guilty of this horrible crime. After full consideration the Board has decided to take up this work in a systematic way, and to discharge the solemn duty imposed upon it without fear or favor. In the very nature of things this is one of the most difficult of crimes to prove, and for this reason it has been decided to earnestly invoke the aid of the county medical societies, boards of health, court and other officials, and the people. We promise to make a prompt investigation of every case reported to us, and to cite physicians, high or low, to appear before the Board for trial whenever the evi-



dence warrants it. We appeal to the medical profession in its organized capacity, and to all officials and good citizens, to aid us in the enforcement of this wise and timely law.

It is also made the duty of the Board to revoke the license of any physician who becomes addicted to the liquor or drug habit to a degree which disqualifies him to practice with safety to the people. No drunkard or opium or cocaine habitue is fit to practice a vocation where health and life are constantly dependent upon acuteness of intellect or correctness of judgment. This is a mild offense compared with the cowardly murder involved in every criminal abortion, and this phase of the law will be used to secure reformation wherever this is possible. Copies of this letter will be sent to every newspaper, physician and official in Kentucky, and we ask the assistance of all good people in the work. By order of the Board.

J. N. McCORMACK, M. D., *Secretary*.

Physicians who are interested in the study and legitimate practice of the physical (drugless) therapeutic methods, notably electro therapy, photo-therapy, mechano-therapy, hydro-therapy, suggestion and dietetics, are invited to join the American Physio-therapeutic Association. Address the Secretary, Dr. Otto Juettner, No. 8 W. Ninth St., Cincinnati, Ohio.

The officers for the ensuing year are: President, Dr. H. H. Roberts, Lexington, Ky. Secretary, Dr. Otto Juettner, Cincinnati, Ohio. Treasurer, Dr. Geo. H. Grant, Richmond, Ind. Executive Council, Drs. W. F. Klein, Lebanon, Pa.; Jas. Hanks, Brashear, Mo.; J. W. Unger, West Point, Miss.; Chas. S. Northen, Talladega, Ala.; R. W. Gibbes, Columbia, S. C.; S. J. Crumbine, Topeka, Kan.; A. L. Blesh, Guthrie, Okla.

"At the regular meeting of the Second Section of the American Urological Association, held in New York on Wednesday, October 24, 1906, the President, Winfield Ayres, M. D., officially announced the death of the Vice-President of the Second Section, William K. Otis, and called for a report by the Committee appointed for the purpose, to present a memorial on the Association's bereavement. In presenting the report, a member of the Committee said:

"The ties of life-long intimacy which bound us to Dr. Otis, make his death a subject of grief to each individual. The usual set form of preamble and resolutions, therefore, were deemed inadequate by your Committee to express our sorrow. 'Billy's'

demise is, to the older members of the Association as if a much loved brother had gone from us. Your Committee begs to submit :

“ William Kelly Otis’ earthly career ended on September 22, 1906. To the members of the American Urological Association, his death is a threefold blow. Most of us knew him intimately from his childhood ; by his decease we lose a consistent friend, a charming companion, a most estimable colleague. To the Science of Urology his death means an irreparable loss. Cut off in the midst of his career, his inventive genius is stopped ; the new and useful instruments he was continually devising must now be perfected by other hands. The advances in our work, he can no longer aid in developing. The American Urological Association loses one of its founders, one of its most active coadjutors, one of its truest adherents. Our Association shares with the family of William K. Otis, with the profession at large, and with that world in which true manhood is understood and appreciated, that deep grief which the death of so noble a character inspires.

RAMON GUI TERAS,	} <i>Committee.</i>
A. ERNEST GALLANT,	
FERD. C. VALENTINE,	

“ Follen Cabot, M. D., moved, and G. K. Swinburne, M. D., seconded, that the report be accepted and the Committee discharged. Carried.

“ Augustin H. Goelet, M. D., moved, and George M. Muren, M. D., seconded, that the introductory remarks with which the memorial was presented, together with the memorial, be spread upon the minutes, published in the medical journals, and a copy be furnished the family of the deceased. Carried.

“ The President appointed Ferd. C. Valentine, a Committee with full powers to execute the behests of the above resolutions.”

A true copy from the minutes.

WINFIELD AYRES, M. D.,	W. S. REYNOLDS, M. D.,
<i>President.</i>	<i>Secretary.</i>

January 1, 1907, with the *Therapeutic Gazette*—the oldest, strongest, most widely circulated of all three medical journals—we will consolidate the *Medical Age and Medicine*.

## Recent Progress in Medical Science.

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EYE, EAR, NOSE AND THROAT,

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**Acute Mastoiditis, Its Prevention, Diagnosis, and Treatment.**—By John T. Thompson, M. D. (*New York Medical Record*, September 8, 1906). The author lays stress upon the preventive treatment of acute mastoiditis, and looks upon the proper treatment of acute otitis as the most important feature of the treatment of the bone inflammation. Rest in bed should be insisted upon for several days, or rather as long as any mastoid tenderness is present. A good cathartic is also considered important. The most important procedure, however, is to give vent to the pus and accumulated secretions by an early and free incision of the tympanic membrane. The author advises that the operation be done under a general anesthetic. The result of delayed paracentesis is manifested either immediately in the onset of mastoiditis, or the persistence of a chronic aborthœa; or it does not become apparent until after the lapse of several years when the tests will show a disturbed function. After incision of the drum, regular irrigation with a quart of hot bichloride solution every two hours is advocated. In addition to this, alkaline sprays are advised for nose and nose pharynx to lessen the possibility of a reinfection from this source.

The author also speaks of the importance of the care of cases of chronic otitis media, which is probably the most prolific cause of acute mastoiditis. Adenoid vegetations should be removed, the general condition of the patient attended to, and necrosis and granulation tissue if present removed, if possible, through the canal.

Thompson mentions, among the important diagnostic signs of mastoid involvement, the location of the pain when present. Instead of being localized to the mastoid region it assumes the form of a headache. Increasing tenderness over the bone with the amelioration of other symptoms must always be regarded with suspicion. An elevation of temperature is of value in connection with other symptoms. It rarely reaches over 100. The absence of pain means nothing, however, as it is frequently ab-

sent in very extensive mastoid involvement, although sagging of the upper and posterior wall of the canal is by many the deciding point when operative interference is in doubt; but the author expresses the belief that this condition may be produced by extension of the inflammation from the tympanic cavity itself without pus being present in the mastoid bone. Most stress is laid upon the amount and variation of the amount of pus by the author. If only a small amount of discharge is coming from the tympanic cavity a sudden marked increase is indicative of involvement of other spaces, namely the antrum or mastoid cell. Remissions and exaggeration in the amount of discharge occurring several times are regarded by the essayist as one of the best diagnostic points of mastoid abscess, especially in adults. Swelling edema and redness, when present, are considered important diagnostic points, but as marked destructive processes may take place before these symptoms appear, it is unwise to await their development. In children the swelling is a more important aid to the diagnosis on account of the difficulty of estimating tenderness and as swelling usually occurs early in the young. The treatment outlined by the author consists in palliative measures for several days, then if still in doubt, to the presence of pus to explore the bone. Delaying the operation has the disadvantages of having to remove a larger area of bone later, and in that the general condition of the patient may become worse by waiting. Early operation also lessens the danger of involvement of the meninges, the sinus or brain.

**Modification of the Mastoid Operation.**—By E. M. Plummer, M. D., and H. H. Germain, M. D., (*Boston Journal of M. A.*, November 6). A modification of the simple mastoid operation is suggested. The modified operation differs from Schwartze's original method, first in the removal of the posterior osseous canal wall, together with a part of the roof and floor of the bony canal; and second, in the careful pressing back of the soft structures into the cavity thus made instead of allowing it to fill up with granulation tissue or a blood clot. In this way the tedious convalescence following the old operation is largely avoided. They describe their technic in detail. Drainage is secured for the wound by inserting a small gauze tape or cigarette drain into the antrum, and the middle ear is drained by free paracentesis, beginning in the attic, so as to drain the cavity as well as the abscess and antrum; thence sweeping through the posterior fold of the membrana tympani and terminating on a

level with the floor of the annulus tympanicus. So far as cosmetic effect is concerned, they claim that no deformity whatever follows the operation. Ten cases are tabulated to illustrate the practical results of the method. The longest period of convalescence, including complete healing of the wound, was 17 days in one case. The shortest 7 days. There were 3 cases of recovery in 8 days, 2 in 10 days, 2 in 12 and 1 in 16.

**The Treatment of the Intracranial Complication of Middle-ear Suppuration.**—By Edward Bradford Deuch, M. D., New York, *Jour. of A. M. A.*, October 20, 1906. The author reports from his own statistics forty cases of epidural abscess, fourteen cases of brain abscess, forty-four cases of sinus thrombosis, and five cases of general meningitis, having included in his report only the cases which had been operated on.

Of the forty of epidural abscess, four terminated fatally and in only two was death due to general meningitis. This would seem to indicate that in epidural abscesses nature makes an effort to wall off the area of meningeal inflammation from the general cranial cavity. The indication for treatment in these cases is to evacuate the pus and remove enough overlying bone to expose the infected area freely. The author does not advocate the removal of bone until healthy dura is seen, as he believes there is danger of reinfecting this healthy dura. Of the cases of sinus thrombosis it became necessary in sixteen cases to excise the internal jugular. Of the twenty-eight cases in which ligation of the jugular was not deemed necessary, only four died. It is evident from these figures, that in cases of sinus thrombosis recognized early and operated on, death is uncommon. Of the sixteen cases in which the jugular was excised, six terminated fatally. The plan of procedure adopted by Deuch in these cases is to bare the sinus from a point well beyond the knee, exposing at least an inch of the sinus and incising it. If a clot is found it is removed with a curette and the incision in the vein enlarged backwards until free hemorrhage occurs. The bleeding is controlled by inserting a pledget of iodoform gauze between the serous wall and the skull. This hemorrhage, although taken as presumptive evidence that the jugular bulb does not contain a clot it is by no means absolute evidence that there is no clot. Excision of the jugular is advised where hemorrhage does not take place from the bulbous end of the sinus. In cases where the general condition of the patient is good jugular incision should be performed at the first operation. The initial ligature



should be placed about the vein as low down as possible. In the cases of brain abscess, four of the fourteen recovered.

The high mortality in these cases can in part be accounted for in that the diagnosis of brain abscess, in many cases, so obscure that the abscess is evacuated at a very late date. In a large proportion of these cases the diagnosis is based on indefinite symptoms, such as headache, sleeplessness, septic temperature in acute abscesses and subnormal temperature, emaciation, and in some cases optic neuritis in cases of chronic abscess. Where localizing symptoms such as aphasia, sensory or motor paralysis or cerebellar symptoms are present, the abscess may be located with a certain amount of exactness. The majority of abscesses of otitic origin are located in the temporo-sphenoidal lobe and next most frequently in the cerebellum. The temporo-sphenoidal lobe is explored by removing the tegmen tympani or through the squamous plate. If diseased bone is found in the tympanic roof, the path of infection to the meninges and brain should be followed up in this region, otherwise the temporo-sphenoidal lobe should be exposed over the zygoma.

The best instrument for exploring the brain is a long narrow-bladed knife. As soon as pus is encountered, retractors should be slipped into the wound and the abscess cavity thoroughly evacuated and a large cigarette drain introduced into the cavity. In the experience of Deuch it is best to change the dressing daily or every other day. Exploration of the cerebellum is undertaken just below the superior curved line. Otitic meningitis is the most unsuccessful problem with which the otologist has to deal. The author has employed tumular puncture, craniectomy, subdural drainage and ventricular drainage, but has been successful in only one case. Although the results of operative treatment are far from encouraging the author believes that by persistence along these lines we may eventually be able to save cases which are now considered hopeless.

**A Case of Mastoiditis in a Boy of 13 years, Operation Followed by an Attack of Purpura.**—By Wm. C. Braislin, M. D., Brooklyn, (*Brooklyn Medical Journal*, October, 1906). Alarming symptoms and the appearance of purpura followed three days after a mastoid operation, at which time likewise an adenoid operation was performed. Other attacks of purpura followed on subsequent dates. The patient lost a considerable amount of blood at this double operation, at the time when an acute inflammatory process was proceeding in the middle ear. The re-

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

### MALARIA.\*

BY W. F. BLACKFORD, M. D.

LOUISVILLE, KY.

IN attempting to interest such a body of men who are thoroughly conversant with all theories and the practices relative to such an old subject, will say that it is not our intention to enter into or dwell upon the classification and treatment of malaria, but to view it more in relation with its probable effects on animal life, either in itself or as a probable predisposing cause, or forerunner of other and more serious diseases. That malaria is caused by inoculation with the plasmodium malaria whose chief carrier and mode of transmission is the mosquito, I believe science has agreed and proven beyond a doubt, and further that the chief source or fountain from which this mosquito received its chief supply, is from the already inoculated subject. This being scientifically proven we must accept, but in this as in so many other instances, science has not yet been able to tell us how or from what source the first subject was inoculated, or from what fountain the first subject was infected with the plasmodium malariae. From the earliest history of medicine, malarial fever has been known to practically confine itself to the low

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\* Read before the Louisville Medical and Surgical Society.

marshy country of the climatic zone which are inhabited by the mosquito. And the laity have always believed that the malarial fever originated from the soil and stagnated water in these places. The proven facts that the mosquito which has previously sucked the blood of a malarial subject, which after a certain length of time and probable changes in the mosquito's organism, can and does inoculate a non-malarial subject, does not prove to us the origin of the malarial germ or parasite.

Where did the first man or mosquito first obtain this germ?

Is it not possible, even probable, that it may be produced in certain soils, under certain circumstances, or probably from the decay of animal or vegetable matter, found in stagnated water, even though it requires the mosquito not only as a carrier, but also as a medium where this transformation may take place in order to inoculate. And science may yet prove a double fountain from which the plasmodia malaria may be obtained. Be this as it may, we all recognize the almost universal infection of this germ in its favorable climatic zones, and the writer is of the opinion that the medical profession today, on account of its insipient and insidious mode of operandi, and from the fact that it is not a deadly disease in itself, except in rare form, does not fully recognize and appreciate the extent to which it probably affects life's mortality. The vitality and insidious action of this germ in the inoculated subject, until it is thoroughly saturated, is but little less than that of the most dreaded bacteria tuberculosis, and when once thoroughly inoculated, its action is almost as deadly and 100 times more rapid than that disease. During the two years stay in the cotton wood swamps of Red River, which is one of the most malarial regions, I had some opportunity to observe the actions of this disease. With the precaution I took of retiring to the high land at night, with continued use of quinine, I was not able to escape an attack of the milder form. In the pernicious type I have seen patients who did not realize they were infected, be seized with a chill, fol-

lowed by comma, turn golden yellow, and die within twenty-four hours. But as stated above, I wish to view this subject, not so much as a disease in itself, but more in relation with other diseases. How many cases of typhoid, thisis, pneumonia, indigestion, general enemiae, etc., are preceded by malaria. Malarious countries are all sickly communities, not because of the malaria in itself, probably, but because of malaria as a forerunner or predisposing cause. Indeed, with the action of the plasmodium malaria on the blood, sucking out its very life, destroying its energy and resistive powers, impeding its eliminating properties, what disease might not get a foothold during a period of inoculation by this germ. Or is it other than logical to credit it as a factor and predisposing cause to that of the most dreaded disease, consumption. With the tubercle bacillis always present, stood off only by our resistive powers, can you imagine a more opportune time for her to begin to operate than when her sister, plasmodiae malaria has attacked the main fort, the red blood corpuscles, and have them making retreat, when the hemoglobin is practically destroyed, and the delicate thin walls of the air vessels of the lungs, where the tubercle bacilli has been held in a pocket, have become impoverished for the want of food, I ask what is to prevent or impede the action of this tubercle germ to secure a place where she may make permanent her place of abode.

The mortality table shows us conclusively that the rate of mortality is higher in our malarial regions, yet few deaths are reported as from malaria in itself. This is conclusive that its greatest danger lies not in it but in being an accessory to so many diseases; the disease itself probably being governed by the weakest point of the constitution. If what I said is true, as I believe it is, and if the malarial germ possesses the vitality and is capable of causing the afore-named disturbances, and inhabit the system an indefinite period, is not the profession treating such a disease too lightly, and do we not too often say to our patient that you simply have a little malaria, and will be all right in a few days? And in so far as we

probably have as near a specific for this germ as any known to us in the *materia medica*, can we not come nearer eliminating this disease and thereby save many of its sequel.

#### DISCUSSION.

DR. SPEIDEL : I notice that not only the mosquito and the fly have been accused of carrying disease, but investigations have shown that the bed bug is the carrier of disease.

In this connection, though the essayist has not spoken of the treatment of malaria, I would like to ask the members of the Society whether they have had any experience with the new preparation of quinine, euquinine, and whether it has the same effect as quinia sulphas, grain for grain, as the manufacturers claim.

DR. MEYERS : In answer to Dr. Speidel's question, I will say that I have used euquinine. The claim is made for it that it does not disturb stomach digestion and that it does not cause tinnitus aurium. I have used it for a few days in a number of cases, but was always sorry that I had not used quinine. I have used euquinine in children as it is a tasteless preparation; used it in the powdered form and have not gotten good results, and after using it for a day or two I would change back and give some preparation of the sulphate of quinine.

The paper is very delightful and while we have accepted the theory that malarial fever is propagated by the mosquito, in some cases there seems to be some other way of carrying the disease. Especially is this true of chronic cases here in this locality.

I believe that in a great many cases we make a mistake in diagnosing malaria. There are about three diseases that appeal to the doctor very much : they are malaria, muscular rheumatism and the menopause. When a woman, anywhere from thirty-eight to sixty years of age complains, the doctor very often makes the diagnosis that it is due to the change of life. If a patient comes and tells him that he gets up with a bad taste in his mouth and that he suffers from headache and malaise the doctor says that he has a case of malaria. I believe that in many cases with a little further investigation we would make a different diagnosis. I have seen some cases diagnosed as malarial fever and in a short time they developed tuberculosis. Whether these patients had malaria or tuberculosis at the beginning I do not know. What is true of malaria is true of some other diseases.



Most physicians claim that as long as the temperature is not above normal that the temperature is normal. I do not think if a patient is found with a temperature of 98.8 in the morning and 99 in the evening that he is running a normal temperature. A few days ago a physician showed me the chart of a patient operated on, and he said that absolutely no attention has been paid to the temperature. There was a difference of one or two degrees in the morning and afternoon temperature. I do not think this kind of a temperature in these cases should be considered normal.

As far as the treatment is concerned, quinine will relieve these cases, but we should remedy the effect of the disease upon the blood just as we should where there is a large hemorrhage or loss of fluids from the body.

DR. GUEST: I enjoyed the paper very much but did not hear anything about the treatment as I wished to. I believe that calomel is almost as great a specific as quinine in some of these cases, and believing this I precede the course of treatment with quinine by one large dose of calomel, ten or fifteen grains, and I believe it cuts the duration of the disease down considerably.

DR. DAVIDSON: I enjoyed the paper very much and I would like to speak to one or two points. One is in reference to malaria in pregnant women. It is a well known fact that pregnant women do not bear quinine very well, but where pregnant women have malaria large doses of quinine seem to have no effect on the pregnancy. The same dose in a women without malaria would cause uterine pains and occasionally bring on an abortion, but in pregnant women with malaria the quinine does not seem to have the same effect.

I would like to speak to the point that Dr. Meyers brought up. If Dr. Meyers will look up his physiology he will see that the temperature varies every day in a normal, healthy human being; it varies about a degree. That case with a temperature of 98.8 in the evening I would put down as normal. Some patients are perfectly healthy and vary more than that. I have tried that experiment on the students in more than a hundred cases. I have made them take their temperature in the morning and in the evening, and the average variation was a degree, and all physiologies make the statement that the temperature does vary in the neighborhood of one degree.

DR. POPE: I would like to speak a few words with reference

to the diagnosis of malaria. In the first place my observation has been that it is exceedingly difficult to stain and find the plasmodium malaria. I have practically given up hunting for the plasmodium. On the contrary the examination for the pigmentation of the white blood corpuscles in the fresh blood is the more reliable test in my opinion than hunting for the plasmodium.

Chronic malaria I do not believe is malaria. I believe that the so-called chronic malaria is simply a toxemia that is secondary to a primary infection, the malaria leaving the patient in a depleted condition; the so-called chronic malaria is nothing more nor less than a systemic cachexia the result of a systemic infection.

I have many patients from the Delta of the Mississippi, a notorious region for malarial infection, and I must say that a careful study of their blood will reveal no sign of the plasmodium. These patients do badly on quinine and I have ceased to use it. The best remedy that I have found is Warburg's tincture without aloes. This is without doubt the most satisfactory remedy that we can use—at least it has been in my hands. There is no question in these cases; if we will turn the sunlight on them in the shape of the electric bath with cold baths, we will find that the malaria will rapidly disappear. And here is another interesting point to those who sponge in fevers. One should never sponge or use cold applications in the chill stage of malaria. In that stage sponging with very hot applications attended by friction will more quickly bring about relief than the application of cold. As soon as the febrile stage comes on them we may expect benefit to be accomplished by means of cold sponging.

I am like Dr. Meyers in regard to euquinine. I have tried this remedy in nervous patients who do not bear quinine well. I do not think it contains much quinine. This is the reason why I do not give it.

For the past ten years I have studied very carefully the question of thermometric variations in patients, and it is not an uncommon thing for me to have on hand six or seven patients whose temperature is one and a half to two degrees subnormal every morning. I have made thousands—not hundreds—but thousands of such observations—not in thousands of patients—and I have seen hundreds and hundreds of patients whose temperatures are subnormal. I have tested my own temperature

and found it two-fifths of a degree subnormal, but I do not think we will find normal individuals varying as much as one degree. They may vary one degree in twenty-four hours, but if we take the temperature at certain times in the day and compare that temperature with that of the previous day at the same time, we will find that it is the normal temperature at that time of day.

I wish to say that doctors, as a rule, use too cheap clinical thermometers. The best money can buy is none too cheap—that is I think the best instruments are none too cheap, and in order to be sure of these thermometric variations we should know that the instrument with which we carry on the investigations is accurate. The temperature should be taken with an instrument that is reliable.

I happened recently to be in a medico-legal examination, where several different temperatures were secured with different thermometers, and out of that number only two of us tallied—Dr. Reynolds' thermometer and my own. I think his is a better thermometer than mine; it is the best I have ever seen. I suggest in making these temperature observations that we have an accurate instrument.

I believe that many cases diagnosed as malaria are purely cases of autointoxication and that if we would make a little more careful study of the urine and the blood the chances are that we would not so often make a diagnosis of chronic malaria. I am exceedingly leary of the diagnosis of chronic malaria even in patients who have come from the Delta of the Mississippi.

DR. MEYERS: In answer to Dr. Davidson's statement I would say that I am a physiologist; I would say that I studied it once and I do not take back what said, whenever I found a patient—and I do not take the temperature at two o'clock in the morning—I am speaking of taking it at about nine in the morning and at five in the evening, and when taken at these two times and I find a variation of one degree I am suspicious of these cases. If taken at one or two o'clock in the morning, the patient being at rest and there being no muscular action, the temperature may be below normal. I grant that if the temperature is taken at six or seven o'clock in the evening after a hard day's work probably the temperature may vary one degree. I would say that if the temperature was taken at nine o'clock in the morning and at six o'clock in the evening and there is a variation of one degree there is something abnormal.

DR. SPEIDEL: I would like to ask Dr. Meyers at what time of day a surgical case would develop energy.

DR. MEYERS: I believe that every patient in bed produces some energy. The patient may worry about the doctor's delayed visit. If the temperature is taken at one or two o'clock in the morning and the patient is sleeping you may find a low temperature. If the patient is normal and the temperature is taken at nine o'clock in the morning and at five o'clock in the evening we will find this variation.

DR. ABELL: I would say that about all of my patients are treated in the infirmary and I have the temperature taken three times a day, and when I find a variation of one degree my experience has led me to believe that it is not physiological.

DR. J. R. WATHEN: I would like to ask the essayist a question before closing. What is the condition we have if we do not have chronic malaria as some of the gentlemen who have discussed the paper have said—what is the real condition of a medical student coming from Texas with no previous attack of malaria, coming to Louisville at a time of year when there are no mosquitoes, and suddenly develops one of the most profound chills and shows every symptom of malaria? The case was diagnosed as malaria by competent physicians. Where does it come from? There was no history of having had an attack in years.

DR. WILSON: In the first place in answer to Dr. Wathen's question, I can readily see how it may be carried in the system for a long time, and it may take some time for it to develop. That does not necessarily mean that the patient has chronic malaria.

I do not know whether the essayist spoke of chronic malaria, and whether he stated it or not, but I feel that it has been made a bugbear by many physicians who did not take the trouble to make a diagnosis. I have many patients who come and say "Doctor, I believe I have malaria," and they base their diagnosis on the fact that they feel bad of an evening and have a little temperature. I have made a practice of telling them that malaria comes from nothing but the plasmodium and that it is only inoculated by the mosquito. Another thing about malaria is the chill. This I think is the greatest factor in making a diagnosis. I do not believe that anybody has malaria that does not have a chill at some time.

As to the treatment, I want to make a suggestion if no one has suggested it, and that is the use of iodine where there is an idiosyncrasy for quinine. A doctor who had been practicing medicine for fourteen years told me that he had a number of

patients that could not take quinine. I have a number who cannot take this drug. By using the bromide of soda in conjunction with quinine you can avert some of the nervous phenomena. But if we want a substitution for quinine iodine gives good results. I give it in the form of the tincture—two drops diluted with a little water every two hours.

The surest and best way to cure malaria is with quinine given hypodermatically. That is the method I use when it is possible to carry it out. I use quinine hypodermatically in making a differential diagnosis between typhoid fever and malaria, and I never give quinine by the mouth, because I think you can take fifty grains by mouth and never feel it. I inject the quinine into the arm or the fleshy part of the back. If the diagnosis is malaria I get it in the system just prior to the chill. If I have not made a diagnosis and want to differentiate between typhoid fever and malaria, I repeat it every three or four hours, and if there is no result in three or four days I think I can eliminate malaria. I had one patient to whom I gave quinine hypodermatically one hour before the chill was due and he had a slight one. The next day I gave the quinine before the chill and he had no further trouble.

DR. MORRIS: Most of the members have spoken of the chill of malaria. What form is it when we have a severe congestive chill? The patient may feel only a little malaise previous to the violent chill. I would like to have some information as to what causes it.

DR. FARMER: In answer to Dr. Wathen's question, I would say that during the Cuban campaign that some of the American soldiers would remain in the island for quite a long time without having a symptom of malaria, and if brought back to this climate in the winter season many of them would have an attack of malaria with severe chills. The disease was latent in the system and only needed some exposure or lowered vitality to develop.

DR. HENDON: In regard to the idea advanced by Dr. Wathen I would say that in the malarial regions of Mississippi everybody knows, even the smallest children, that they may go to the swamps and live and may never have a sign of malaria, and they may go back to the hills and develop the most malignant form of the disease. I have known people who lived in the swamps and went back to the hills and developed this pernicious form of malaria and died.

DR. MEYERS: I know what Dr. Farmer said in regard to the



troops engaged in the Cuban campaign is true. It shows that the plasmodium of malaria may lie dormant in the blood. It seems that while in these malarial regions they are bitten by the mosquitoes and infected with malaria, but at the same time the body by the action of the leucocytes produces an antibody and this produces immunity to malaria while they live in a malarial region. As soon as they go into another climate the disease develops. Patients have lived in yellow fever districts without having yellow fever, but as soon as they would move to other districts the yellow fever would develop, because they would lose the antibody which protected them. I know that soldiers during the Cuban campaign were all right so long as they lived in the island, but when they would come back to this country they would develop malarial fever.

DR. BLACKFORD (*closing*): This is an old subject and I appreciate the discussion and I feel that it has been quite an interesting one.

In regard to the case of the students from Texas, mentioned by Dr. Wathen, it is true that quite a number of students from all over the country attend the medical colleges in our city. It is true whether these students are from the North or from the South after they remain here a while the chances are that they will be affected with malaria. If from the South an old latent infection is revived, and if from the North probably a new infection. The same is true if they live in the South and go to the North. Malaria is likely to develop.

The point I had in mind in writing a paper on the subject of malaria was not to discuss the disease itself so much, but the effect it has on the system, devitalizing the system and allowing the more serious diseases and complications to take hold of it. In my opinion the surgeon sees many cases that would never come under his observation if the patients had never had malaria. I have been struck with the number of men going from the North to the South weighing as much as 200 pounds, and in a few months they would be reduced in weight to 150 pounds, and the anemia following and an examination of the blood shows how thoroughly the work must have been done in the coloring matter of the blood.

In regard to a chill, some state that malaria is always accompanied by a chill. I am inclined to doubt that until the infection becomes very marked. I suppose that after the system becomes thoroughly inoculated that doubtless we have a chill. I

think that is the case in all probability in a congestive chill—it is probably a pernicious malaria. I have seen patients that never had malaria, so far as they knew themselves, turn yellow and die in a few hours. They did not know that they were infected with malaria; they never had any malarial chill at all.

Ordinarily, I believe the malarial germs or the disease effects may stay in the system not only for months but for years; they may lie dormant and be revived. Whether the malarial germ really remains with us that long, or whether it produces an infection that does, I cannot say. I believe that one infected with malaria is more easily infected thereafter as a result.

DR. SPEIDEL: I have a patient under treatment. She is extremely anemic. When I first examined her I noticed a mitral regurgitant murmur. I did not see her for two weeks, when I was called to the house. I examined her and by inspecting the chest I noticed a wavy motion on the left side about an inch below the nipple, and the question was between a dilatation of the heart and an acute pericarditis. The woman had a temperature of about one degree. There is no question as to the mitral regurgitant murmur, and she also had an aortic obstructive murmur. The sounds of the heart are not muffled. The second sound can be heard very plainly. If she has dilatation of the heart I would expect a great deal of cough; she would have enema of the lungs and swelling of the extremities. She has none of these signs. I cannot make out any increase in the cardiac dullness. I am at a loss to know whether it is an acute pericarditis or dilatation of the heart. The temperature this morning was 101.5. She has no dyspnoea; that is the thing that puzzles me. Her pulse is 120; it is sometimes as low as 80.

DR. GUEST: I should think from what the doctor says, from the extreme anemia and no pain as she would have in pericarditis that there is a possibility of the murmurs being anemic.

DR. SPEIDEL: Both are transmitted.

DR. WILSON: It looks like there might be an infection in the pericardium following an acute condition. In the first place the apex beat may not be located at the point where the waviness is seen, and the temperature is low with practically no pain, and lastly, by no means least from the great amount of prostration as well as anemia, it strikes me that there might be a low form of infection there.

## SCALP AND SKULL INJURIES.\*

BY J. T. DUNN, M. D.,

LOUISVILLE, KY.

OWING to the fact that what appears to be a simple contusion or abrasion of the scalp may be complicated with fracture of the skull, laceration of brain or membranes, or rupture of blood vessels, a brief consideration of scalp wounds and their management will not go amiss. Inasmuch as the treatment and prognosis is so greatly different in these various conditions, it behooves us to be accurate in our diagnosis. It is not the intention of this paper to lay down any new theory or treatment, nor to touch upon any phase of scalp, skull, or brain disease.

We wish to review the present recognized method of handling such cases as come under our observation, with the history of a blow on the head. The special aim of the essay is to call forth a more careful and thorough examination of scalp wounds in order to determine its extent, not especially the damage done the scalp, for this is insignificant in the majority of cases, but to the structures underlying the scalp injury. Indeed there may be very little evidence of damage to the scalp when the greatest damage has been done to the skull and its contents. There is no question at the present day as to the treatment of simple incised or lacerated wounds of the scalp, as it is well understood that if this is the extent of the injury, that a simple shaving or thorough cleansing of the part is all that is necessary before applying the suture. Neither is it a question in this day and age of surgery as to what shall be done with the other extreme, that of compression in which there is not only a scalp injury, but a marked depression of skull, with its consequent compression, and possible laceration of brain. The method to pursue is clearly mapped out, and such patients are sent immediately to the hospital, where, with trephine and chisel, the depression is lifted. The middle class or border line cases

are still the stumbling blocks of the average physician and surgeon. Indeed it is now, as formerly, and possibly ever will be, impossible to draw a hard and fast line by which these cases may be always handled. The discretion of the surgeon must be relied upon.

It is especially important that all cases of scalp injuries, no matter how simple, should be carefully scrutinized and an absolutely correct opinion be formed. No doubt, many apparently simple scalp wounds, especially of the contused type, cover lineal fractures, or possibly fracture with depression. These contusions are usually greatly swollen when they present themselves to the surgeon. This swelling is due to an accumulation of blood between the scalp and skull, is usually softer in the center, but hard and indurated at its circumference. This is a most difficult condition through which to make a diagnosis of skull injuries, and if the surgeon is in the least hurry, it is quite likely that a fracture will be overlooked.

The American Text Book of Surgery says upon this point that, "after a simple contusion this ridge is elevated considerably above the general countour of the head, the edges are round, and pressure will not uncommonly cause pitting. If there be fracture with depression, the edge is usually about on a level with the surrounding skull or below it, and the margin is sharper, more irregular, and less circular."

This method of making a differential diagnosis between fracture and no fracture seems to me to be surgery in the dark. It has been my practice to incise such contusions, turning out the clots and make a thorough examination of the skull. There is no doubt in my mind that endeavoring to make a diagnosis, as above outlined in the American Text Book, is responsible for many skull and brain injuries being overlooked, only to develop trouble at some future date, and when these cases do present themselves for examination and treatment, the evil effects of the injuries are so fully established that little can be done for their relief. Should a fracture of the skull result, statistics show that out of eighty-six cases collected by W. H. Earles,

M. D., Milwaukee, Wis., fifty-seven of them show positive evidence of cerebral disturbance, thus proving that where an injury is of sufficient violence to produce a fracture of the skull, in about sixty-six per cent. of cases there is also injury to the brain structure. There seems to be plenty of evidence also that in many cases where there is no evidence of fracture to the skull wall, that damage has been done to the brain or its coverings. In these cases we are to be guided in our treatment by brain symptoms. These are ordinarily known as concussion and compression. If all cases of concussion were medical and all cases of compression surgical the way would be clear, but this is not the case. The whole situation in a nut-shell is summed up in the statement which may be adopted as accurate, that *all cases* of compression and *some cases* of concussion are surgical. In support of this statement we quote from DaCosta, where he says: "Trephining cases where no symptoms exist, although there is marked depression, often prevents disastrous consequences arising in the future;" and from the International Text Book of Surgery which says: "The treatment of compression is naturally to take away, if possible, that which compresses." The American Text Book of Surgery, in brief, says: "If it (compression) is due to hemorrhage, depressed bone, foreign body, abscess, serum or tumor, trephine for relief."

In all of the above quotations surgical intervention is made imperative in *compression*. In the American Text Book we also find this statement connected with the treatment of *concussion*: "In many cases of severe concussion it is *proper immediately* to raise a horse-shoe flap in order to determine at once the question of fracture." The International Text Book of Surgery says, "if the symptoms (of concussion) still fail to improve, it is possible that some sign pointing to a definite portion of the brain may appear, and to this the surgeon should direct his treatment. DaCosta says, "if signs of compression arise (in concussion cases) it is best to trephine, as the compressing agent may be a clot. If inflammation arises some surgeons will not trephine, but it is wise and proper,



especially if the damage seems to be localized, to incise the scalp and inspect the bone. If a fracture is discovered and the symptoms are serious, perform an exploratory trephining, open the dura and secure drainage for inflammatory products."

Thus it is seen by the three quotations above recited that two of them agree that when compression symptoms arise *secondarily* in *concussion* cases, they too must be subjected to operation. The other one says, that in many cases those with *serious concussion* symptoms become *at once* surgical, at least to the extent of inspecting the skull for fracture.

The reading of a paper by W. H. Earles above referred to before the Surgical section of the American Medical Association and published in *The Journal*, July 18, 1903, entitled "Necessity for More Care in the Treatment of Skull Fractures," brought out in the discussion some opinions, bearing upon this point, worth reviewing.

The author in the body of his paper says: "We believe that all fractures of the skull with depression should be trephined, the depressed bones elevated, and underlying soft parts carefully examined, and if found injured, repair attempted."

"We believe that all fractures of the skull, with or without depression, when symptoms of cerebral disturbance exist, should be trephined. We believe that all skull fractures, regardless of the presence or absence of cerebral symptoms, should be carefully examined before the soft parts are closed over them."

The following is a brief opinion of a few who discussed the paper:

Dr. J. G. Sherrill, Louisville: "I believe that many cases of this class are not treated properly as mentioned by the speaker. If we have the symptoms of compression of the brain, then we have a demand for the operation, but there is no less a demand for operative procedure where the symptoms indicate what has been formerly known as *concussion* of the brain. I believe when you make a diagnosis

of concussion of the brain you should always make a thorough examination of the shaven scalp."

Dr. T. J. Sullivan, Chicago: "It seems to me that all classes of injury to the skull can be divided into two classes, simple and compound, and all cases of simple fracture should be kept under observation and surgical interference undertaken as soon as the motor symptoms are noticed. The compound fractures demand immediate operation under the most thorough aseptic methods."

Dr. B. B. Davis, Omaha: "To decide when to do an operation immediately and when not to do an operation is not always so easy, and I think we should always consider, first, is there any danger if we do not do the operation; and second, are we going to leave this patient in a bad condition if we do not do it? I think we have trephined in two or three instances unnecessarily. In some cases I have not found enough pathology to warrant the operation. The question is whether there is not enough cicatricial tissue to form dural adhesions, so that in the future that patient may have paralysis due, not to the original injury, but to the trephining. I think we should not do this operation unless it is absolutely necessary."

Dr. Charles H. Lemon, Milwaukee: "In injuries to the skull, especially those caused by a fall from a height, we sometimes find serious intracranial disturbance without demonstrable hemorrhage within the cranial cavity, and I think it is the experience of those who have seen many of these cases that some cases are allowed to die under a diagnosis of concussion of the brain, which might possibly have been saved if subjected to operative procedure. There is a pathologic condition of the brain following trauma that is oftentimes overlooked. We may have, and we frequently do have, contusion of the brain itself and its membranes, and as the result of that contusion we have edema of the brain causing intracranial pressure of a fatal character which might be avoided by trephining and drainage."

Here we have a number of opinions, *all* agreeing on immediate surgical interference in *all compression* cases, and

some, *immediate* operation, in *all concussion* cases. Personally we have always rigidly applied the following rules :

(a) Invariably inspect the skull.

(b) All fractures without depression and all scalp wounds with motor involvement should be trephined.

(c) All depressed fractures with or without motor involvement should be trephined.

By religiously adhering to these principles, as yet we have not had occasion to regret their use.

#### DISCUSSION.

DR. GOSSETT: I enjoyed the doctor's paper very much. We have plenty of time and I would like to report a case I saw a short time ago. I saw this man Bischof who murdered his wife two or three years ago. I was one of the physicians appointed to ascertain whether he was insane or not. He gave a history that a year or two before the time he murdered his wife of falling out of a wagon and falling on the top of his head. Examination showed a depression on the top of his head. Following that I got a history that at times he would go out in the pasture on his farm and sit and play in the dirt like a child and throw the dirt up over his head. Oftentimes in the middle of the night his family would find him under the bed in the dark. He drew a gun on a physician once for no reason at all. He took a rope and put it around his child's ankles and put the child down in a well. One time he took a gun and held a man up. He did not know the man but made him get down off his wagon. Following this a year before he murdered his wife when he would bring the produce of his farm to market his wife or one of his boys would come with him. He did not know how to take care of his money. His wife had made the remark that he was crazy and would kill her. This imprisonment in jail might have had something to do with his condition when I saw him.

It was quite an interesting case, and of the many physicians in the case only two would say whether he was insane or not. I believe with this history and the murder of his wife following that the man was crazy. The only thing that his attorneys could get out of him was that about two years ago his wife had a Negro baby and fed it to the hogs. That is all they could get out of the fellow. A few months after that they could get nothing out of him.

When I saw him, six months previous, he had been in the habit of rubbing his hands together. His eyes were closed and he had kept them that way for six months. When he would wake up in the night he would begin mumbling to himself. We tried our best to see his eyes but his lids were closed so tightly that we could not see them. I saw him twice and the instant we would try to examine his eyes he would jerk away.

He had symptoms of general paresis. In standing he would tremble; he could not stand erect. In walking he would shuffle along; he would not lift his feet. It would be interesting to know if this fall on his head brought on this condition and if there was an injury to the covering of the brain or the brain itself. Our diagnosis was general paresis. I believe the man will die inside of a year. The authorities state that in general paresis they die in three or four years. There is no doubt in my mind, after seeing this man and getting this history preceding the murder of his wife, that he has a general paresis and is now in an advanced stage.

DR. SPEIDEL: Dr. Dunn's paper is very interesting to me because of a case that I have had on hand recently that puzzled me a good deal. You have probably seen in the papers where a grocer was injured by having a bowlder thrown at him and striking him on the side of the head. I was called in and found the grocer sitting on a chair moaning. I took him to his home across the street and put him to bed and examined the side of the head carefully, and found a swelling that extended from about an inch from the corner of the eye backward about four inches. It was a marked swelling. Of course I feared concussion or compression of the brain due to hemorrhage or fracture. I could find no evidence of a fracture at the time. The patient was hysterical and I thought it safe at least to watch the case. I gave him a hypodermic of morphine and had him elevated in bed and applied cold to the head for twenty-four hours. The swelling gradually subsided and in the course of a week the man was out of bed.

I would like to know from the essayist whether the proper course was pursued under the circumstances. He was struck with the flat side of a large flat bowlder. If he had been struck with one of the corners serious results might have followed.

DR. HEFLIN: Dr. Dunn's paper is a very interesting and practical one. It has been difficult for me, where there were contusions of the scalp, to find out by palpation much about the

skull. The effusion beneath the scalp often resembles a fracture or depression. In severe cases I have always made it a practice to make an incision, turn out the blood clot and examine the bone for fracture or depression. However, in cases with slight traumatism with a small amount of effusion, I have treated them on the expectant plan as indicated by Dr. Speidel. The incision will not aid us any in making a diagnosis as to injuries inside the skull. It will only be of service in pointing out the fractures and depressions near the seat of the injury.

I would like to ask Dr. Dunn if he opens up the scalp in all mild contusions?

DR. ALLEN: I enjoyed the doctor's paper. I think in dealing with injuries to the scalp we cannot always tell what course to pursue. Frequently there are four conditions that we should consider, especially when the patient is brought in and no one has been an eye witness of the injury. We must differentiate between uremia, alcoholism, concussion and contusion of the brain. After we know that we are dealing with some internal disturbance, I think it is well for us to determine, unless there are local symptoms given, whether we are dealing with concussion or contusion. Concussion is a condition similar or the same as shock—a reflex vasomotor paralysis. Concussion is a type of shock, the result of direct injury to the scalp. When the skull is struck it elongates and the brain accommodating itself to this elongation is disturbed. There is a disturbance of the respiratory and cardiac centers. Frequently we have this condition when there is no injury produced to the skull proper. We have a contusion as a result of this sudden change in the shape of the brain. Sometimes it gives a fracture by contre coup.

I agree with Dr. Dunn thoroughly that when we have an injury to the skull without compression, or even if the fracture is not compound, it should be opened up. There is little danger of infection. Nature takes care of it. Where we have a fracture, especially if a local fracture and it extends in any direction, the patient should be trephined. I have often wondered if one did not do harm with the mallet and the chisel, because this knocking on the skull disturbs the cells, especially those of the psychic area and we know that epilepsy is a molecular disturbance of these cells in the brain. Even after operation may not some secondary symptoms arise because where we have repair of this fibro-osseous tissue adhesions take place and this gives constant irritation and Jacksonian epilepsy develops.



In the case reported by Dr. Gossett if the history is correct the patient must have epileptic insanity.

DR. DUNN (*closing*): There is no doubt that just the class of injuries mentioned in the case reported by Dr. Gossett are often neglected. In this case, as well as in the case reported by Dr. Speidel, the injury produced by the impaction of a broad surface against the skull is more serious than injuries produced by missile with corners or edges which strike the head. There is a chance in the latter case of the missile being deflected and producing only a scalp wound. This could not occur if the missile was round or flat, but a fracture of skull with or without depression, or severe concussion, might follow without there being an opening through the scalp.

In the case reported by Dr. Gossett, where there was a history of an injury to the head by falling upon the ground, alighting upon his head, there may possibly have been a fracture of the skull with depression which was never detected, the patient getting well without anyone knowing his true condition, only later to develop insanity or epilepsy, as these cases frequently do. We may have only concussion symptoms when there is an actual compression by depressed bone.

I remember to have treated a boy who was injured at a mill that illustrates this very point. While oiling machinery his hand was caught between a belt and pulley and he was thrown into the air, striking his head against the corner of a truck, producing about a one inch scalp wound. About one inch from the abrasion there was a decided fracture with depression, showing that the force had carried the scalp over one inch beyond the normal position before it was sufficient to go through the bone. I removed the boy to my office, and he showed no signs of compression or concussion until he reached my office, when he complained slightly of nausea. Upon the discovery of fracture with depression, I removed the boy to the infirmary, and with chisel lifted the depressed bone. I do not often use the chisel in these cases, for as suggested by Dr. Allen, I do not like the use of a hammer and chisel on the skull, and only use it where it is desirable to lose as little bone as possible. In this case, the depressed bone was raised without removing any of the healthy bone, which would have been necessary had the trephine been used. It is on account of the frequency with which head injuries are accompanied later by insanity, epilepsy, and other neurotic conditions, that I hoped by this paper to stimulate a

more thorough and careful examination of all scalp injuries, however simple they may appear.

I want to thank the gentlemen for the discussion of this paper.

DR. SPEIDEL: This patient showed no signs of concussion or compression up to the present time.

DR. DUNN: This boy I mentioned did not show signs of compression and concussion, neither did Dr. Gossett's case show any of these signs, so far as the history shows. The first serious symptoms ensue later in the way of insanity, epilepsy or other neurotic conditions.

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NEW YORK, September 28, 1906.

*Editors of The American Practitioner and News:*

SIRS:—I have perused numerous articles on the Pure Food Question and the evil effects of coloring matter and preservatives on the human system, but not until recently, however, have I perused articles written by physicians who claim that boric acid and boron compounds, which are used quite extensively for preserving food, are the cause of appendicitis. An article appeared in the *New York Medical Journal* April 17th, 1906, and in the *Truth* of Buffalo, N. Y., June 30, 1906, stating that boric acid was the cause of appendicitis.

If such statements were true, however, the English nation would be wiped out of existence. They have consumed foods preserved with borax for decades, and if food preserved with boron compounds was dangerous to health, the entire medical fraternity would have learned of it years ago.

I have had a great deal of experience with boric acid, and have always found it a soothing, cooling, healing sedative agent. The action of boric acid on the cuticle and mucous membrane is to allay inflammation, not to cause it. It is recognized as the most innocent antiseptic extant.

It is an antiseptic which never irritates nor inflames and thus enables a natural healing process to take place without interruption. Its action on the organic tissues is

seen by the blood. Concentrated boric acid mixed thoroughly with fresh blood only delays and cannot prevent coagulation.

In spite of all that has been said against boric acid, it is clear that its action on albuminous bodies has no analogy with any other acid except carbonic acid gas. It has been stated that weak or diseased kidneys could not eliminate boric acid. It is a fact, however, that it forms remedies of great value in kidney diseases. If the vermiform appendix were inflamed, boric acid would have a tendency to allay inflammation instead of exciting it. Solutions of boric acid have been used in every cavity of the human system with beneficial instead of detrimental results.

That cases of appendicitis are more numerous now than they were years ago cannot be denied. Years ago, however, such cases were diagnosed differently. In the census year of 1890, there are no records of any appendicitis cases. In 1900 there were 5,111 cases.

There is no doubt that a few cases are caused by foreign bodies entering the appendix. Coprolites are found much more frequently, however, than foreign bodies.

Bryant, in his paper, published in the *Annals of Surgery*, February, 1903, states: "I found 124 cases, abnormal matter in 70 per cent. males and 55 per cent. of the females." Renvers, in the *Deutsche Medicinische Wochenschrift*, 1891, found in 459 autopsies, 179 coprolites and about sixteen foreign bodies.

We do not as yet understand the functions of the appendix. Without doubt almost every case of inflammation in the iliac region can be traced to a diseased appendix. Fecal matter is forced into the appendix, which is so constructed that it cannot drain itself which causes inflammation. The vermiform appendix being a weak organ is unable to protect itself.

Constipation would have a tendency to interfere with the supply of blood by direct pressure on the single artery which supplies the blood.

A great many cases can, no doubt, be attributed to our bad habits of eating too much and masticating our

food too little, which causes dyspepsia, constipation, and general derangement of the functions. The hurrying restless lives we lead certainly interferes with the normal working of our digestive organs.

I firmly believe that indigestion, constipation, diarrhea and other digestive disturbances are the prime factors which favor the development of appendicitis.

Yours very truly,

H. H. LANGDON.

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## Proceedings of Societies.

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### LOUISVILLE MEDICAL AND SURGICAL SOCIETY, DECEMBER 17, 1906.

#### REPORT OF CASES.

DR. GUEST: I have had a case that has been a puzzle to me for two days. I would like to know whether any of the physicians present has had in the last few days a case of the old type of remittent fever.

This patient recently came from Mississippi. Sometime during the past week he developed a little temperature. I saw him Saturday morning at the Galt House with a temperature of 102 1-5, pulse 100. I examined him thoroughly for typhoid and appendicitis, but nothing suspicious of typhoid except the temperature and tongue. He was coughing a little and I therefore examined him for pneumonia and pleurisy, but could find nothing the matter with either lung. I gave him five grains of calomel Saturday morning, which acted four times, still the temperature was not affected. The next day I gave him citrate of magnesia, and it produced two or three actions. In the afternoon his temperature went to 104 1/2. Sunday morning I commenced with quinine and have been giving him fifteen grains a day for the past two days. This produced a marked ringing in the ears, but practically no reduction of temperature. I cannot make anything out of it *so far* from actual symptoms but an old-fashioned case of remittent fever.

Since he so recently came from so pronounced a malarial district I think it possible to be only malaria. He had typhoid several years ago, but of course that would not eliminate the idea of typhoid fever now. If my snap-diagnosis is correct it is the first

case of remittent fever I have had for several years. I wonder whether any of the other physicians present have had in the last few years any of these so-called cases of remittent fever in Louisville.

DR. SPEIDEL: I think the proper thing to do would be to examine the patient for malarial fever and for typhoid fever. As a test for typhoid fever I would like to suggest one just mentioned to me by one of the gentlemen who has been elected a member of this Society this evening. He has used it a half dozen times in cases of typhoid fever and he says it will tell absolutely whether the patient has typhoid or not. It is the Widal reaction. He has a culture of the typhoid bacillus that keeps indefinitely. He takes a little blood from the ear of the patient and after the serum separates it is mixed with the culture and the whole fluid is put into a test tube, and if coagulation takes place the case is one of typhoid. If the case is not one of typhoid no coagulation takes place.

DR. HEFLIN: I only have to say that until Dr. Guest has made these other examinations that this may be a case of typhoid fever as well as malarial fever. I had a case of typhoid fever recently in which the man gave a history of having had typhoid previously. I also had another case with a similar history. The fact that he has had one attack of typhoid fever does not prevent him having another attack.

So far as the eruption is concerned we know that all patients do not have the rash upon the abdomen, and as this fever resists the action of quinine I would suggest that it might be typhoid fever.

DR. MEYERS: I think the man has typhoid fever. I do not believe from my experience in this country that he has a remittent fever unless he has a typical paroxysm—chill, fever and sweat.

The text books tell us that when one comes out of that climate into this, if a subject of malaria, there is a flare no matter if he has been free from malaria in his native state.

I believe that typhoid fever is a protean disease and when we have fever existing for three or four days after clearing of the bowels and giving quinine I believe it is typhoid. I saw a case recently with another doctor and told him I thought the patient had typhoid fever. He did not think so until the patient had a hemorrhage. In speaking of the spots in typhoid fever it may be that Dr. Guest's visits are far apart. We should remember



that the spots occur on other parts of the body as well as on the abdomen.

I think the doctor will find that sometimes in typhoid fever we have an absence of all the symptoms until the second week. I should be suspicious of those cases where the temperature runs high. The patient may have a pyelitis or something like that.

DR. GUEST (*closing*): I have not noticed the character of the stools. The temperature would suggest that he has typhoid fever but I cannot find any of the other signs at present.

The patient is a distinct blonde and has a very clear, fair skin. Even with this there is not an eruption on him of any description. As I said I have been very suspicious of typhoid all the time. With the exception of the tongue and temperature I find nothing else that would indicate that he has typhoid fever at present.

I brought up this case to-night more to ask if any of you have recently had a genuine case of remittent fever in Louisville.

DR. HIBBITT: I would like to ask Dr. Meyers if he considers gurgling in the right iliac fossa as worth anything in the diagnosis of typhoid fever?

DR. MEYERS: I would like to answer Dr. Hibbitt by saying that "one swallow does not make a summer," and that one symptom does not make typhoid fever.

DR. GOSSETT: I have a very interesting case to report. Before reporting the case I want to go into the history of the case. I was called five or six months ago to see a patient who had uterine or ovarian trouble and I was afraid had a pelvic abscess. She was staying then with a young married couple in Louisville. I told her that I would like to have consultation with some surgeon. They wanted a surgeon; I will not mention his name. He came and made an examination of the patient.

After the surgeon and I left the house he remarked that this is an interesting case—speaking of the young married woman. He said he did not see why she had married because she had no vagina. He said that he had examined her once at the infirmary and she had no vulva at all—everything was just as flat as his hand. She had been married for a year. I told him that was peculiar and if I had an opportunity or she said anything about it I would examine her.

So one day she said to me, "Doctor, I have a peculiar condition that I would like to ask about." She told me that she had never menstruated. She said "Doctor, there is something the matter with me. I was taken to the infirmary by a physician and

put under chloroform and was examined and taken back home." I asked her why, and she said she did not know. I told her that I would examine her and find out why she had not menstruated, that there might be such a thing as an infantile uterus, etc. She said that she would like to know something about herself. I examined her there at the house and I was able to introduce one finger, and feeling all around I could find no evidence of a cervix. It was perfectly smooth all around the fornix of the vagina.

I advised her to come to my office as I would like to make a thorough examination. I made an examination and I could absolutely make out no uterus, etc. She was not large enough to admit two fingers. The depth of the vagina was about four inches. I tried my best to see if she had infantile uterus but could absolutely find no uterus or ovaries. The external organs are present—the labia majora, minora and clitoris.

This is a very interesting case to me. I asked her if her husband had sexual intercourse with her and she said he had. I asked her if she had any pleasure in sexual intercourse and she said she did. Claims that when she has a movement of the bowels unless the contents of the bowel is liquefied that it is painful.

I have read of cases of infantile uterus where you could make out something from examination, but in this case there is absolutely no uterus.

DR. SPEIDEL: I would say that the condition of the vagina now is due to attempts at intercourse. There are cases reported of atresia of the vagina where intercourse took place through the urethra. One case is reported where impregnation occurred through a fistulous opening between the bladder and a partial vagina higher up.

The proper thing to do is to make a vagina. If the woman is properly developed otherwise she has a uterus and ovaries. The thing that astonishes me is that there is no vicarious menstruation or the presence of hæmatometra—that is an accumulation in the uterus or vagina higher up. Under those circumstances the blood accumulates in the uterus and distends it, and such a uterus may simulate a fibroid tumor or pregnancy.

DR. DAVIDSON: From the history of the examination it seems to me that the Doctor has a case of congenital malformation. The tubes and the uterus and vagina are developed from the mullerian ducts, and very likely in these cases the mullerian ducts did not go on to full development. The external organs in the female are developed separately. The external organs are normal and

what the Doctor takes to be the vagina has been pushed in from the act of coitus, and I doubt whether it is a true vagina because the vagina is developed from the mullerian ducts the same as the uterus and tubes. There is no doubt but in this case the mullerian ducts did not develop properly.

DR. WEBER: I have had an interesting case in the last two weeks of bromide poisoning. I had a case in to see me three weeks ago and the fellow had a septic ulcer infection—I mean the local ulcer infection or chancroidal infection. Of course we had to do either a circumcision or a dorsal incision and preferred the circumcision. This was a fellow about twenty-five years of age. He weighed 250 pounds and we had to give him a general anæsthetic. When we circumcised him we could not remove all of the infected surface and of course the circumcision incision became infected, and then after two or three days we cauterized it and treated it like an ordinary chancroid, and it began to granulate in two or three days.

This fellow complained of continuous erections like they do in these cases and he bothered us to give him something; and it is right hard to control them. We prescribed the bromides for him. We told him he would have to get under their influence before they would have much effect. We gave him thirty grains three or four times a day. We did not see much good effects for a night or so. He was a fellow that seemed not to care much for himself. He said if that number of doses did not control the erections he was going to take more. A few days after that he came into the office as drunk as he could be. He did not know what he was saying. He could hardly take care of himself. But the point I wanted to bring out was this peculiar effect of the bromides. We do not know how much he took. He acknowledged that he took twice the dose. I believe that he took three or four times the dose. The druggist could not tell how often the prescription was refilled.

That was two weeks ago. To-day the boy walked in and asked me where he was. This shows the effect of this drug and the slow elimination of it. His pupils were dilated. We stimulated him. The point that interests me is why he should be under the influence of the drug so long.

PROCEEDINGS LOUISVILLE CLINICAL SOCIETY,  
DECEMBER 4, 1906.

## PATHOLOGIC SPECIMENS.

DE. CHEATHAM: I have a little specimen here to illustrate the use of the magnet in extracting pieces of steel from the eye. Without the use of the magnet I do not believe that this eye could have been saved with good vision. This is the piece of steel removed from the eye. This man was operated on the day following the injury. The accident happened at ten o'clock and he was operated on the next day at one o'clock. The piece of steel passed through the cornea and was buried in the iris. Without the magnet we would have made an incision and attempted to remove the piece of steel with a pair of forceps, and probably it would have dropped into the anterior chamber and would have been difficult to find, if we had been able to find it at all. If we had been able to remove the piece of steel with the forceps we very probably would have had a prolapse of the iris, and would have to have done an iridectomy and possibly have injured the anterior capsule of the lens.

A small opening was made and the magnet inserted into the wound and it brought the piece of steel with it. I have had some eight or ten cases with this magnet. Probably in half vision was lost. The piece of metal may be so large that the trauma destroys the eye. One case I saw with Dr. Dabney, in which a piece of steel from the rim of a chisel was knocked off and entered the eye. It went through the sclera and the insertion of the internal rectus and the ciliary body. It was impossible to tell with the magnet the size of the metal. We enlarged the wound and when we tried to extract it we found it crossways in the wound so that we had to remove it with the forceps. If we could have gotten at one end of the steel we could have removed it without trouble with the magnet. It went through the ciliary body, sclera and lid. The eye was lost, nothing could have saved such an eye.

I have seen a piece of metal which entered the eye at the inner part of the sclera and had gone across to the temporal side of the vitreous chamber drawn across and extracted at the original wound by the magnet. I have saved several eyes. With this piece of metal it would have been dangerous to have attempted to remove it by any other means.

It is of value in making a diagnosis when the eye is filled with

blood so nothing can be seen. If there is a large piece of steel in the eye the eye will almost be drawn out of its socket if all the current is turned on.

So the magnet, while it does not save all of the eyes, still it is a great addition to our armamentarium.

I had a case sometime ago. There was a piece of metal in the eye. The piece of metal had gone through the cornea, iris and ligament of the lens, not wounding the lens at all. He was treated here and the eye was getting well. Some old maids in this city insisted that he should go to a doctor in Cincinnati. The young man had passed for Yale and was packing his trunk, and in driving a nail a piece flew off and struck him in the eye. He was taken to Cincinnati and in using the magnet the eye was destroyed.

I had a similar case with one of the railroads here. The wound was exactly in the same position. The metal was buried in the sclera and was left there. The man has vision of 20/20. I think if the boy had been treated in the same way and the piece of steel left in the eye he would not have lost the eye. The piece of steel has been in the eye for two years and the vision is 20/20.

DR. W. H. WATHEN: Reports of the kind made by Dr. Cheatham are of great value to the medical profession, for these reports remind us of the fact that much can be done in cases where iron enters the eye that could not be done without the use of the magnet, and, therefore, it impresses us with the great value of referring such cases as soon as possible to some one who is capable of doing this work, thereby saving many eyes, adding reputation to surgery, and doing great good to humanity. We are not as familiar with the exact cases in which the magnet is applicable as we will be with the thorough investigation and the rapid progress being made. Some eyes have been destroyed by using the big magnet, and it requires experience by such men as Dr. Cheatham to decide in which cases it would be best to use the magnet, and in which cases it would produce traumatic injury, so that other means might be resorted to.

DR. CHEATHAM (*closing*): I will say that this man's vision is perfect 20/20. The eye became infected and I dressed it with dionine ointment. It is one of the opium derivatives. It has a great effect in infections of the eye. Take an infection following a cataract operation and a solution of five or twenty per cent. dropped in the eye will stop the infection even if it is down into the vitreous humor. When it is put into the eye one eye becomes



edematous, chemosis occurs and the lids become swollen. The first drop causes pain; after that it is a local anæsthetic; the other drops will not cause pain. I do not see why this could not be used in other forms of surgery. I dressed this eye with di-  
nine ointment, and all signs of infection began to disappear and the iris regained its normal color. As I stated before this patient recovered with perfect vision.

The magnet is useful in general surgery. It can be used in cases where you are supposed to have a needle in the foot. If there is a needle there it will draw the flesh up and cause pain. Dr. Vance has a piece of steel in his hand, and when we put the magnet over it it draws the tissues up. The steel has been in his hand for twenty years. Take the wound of a skull with a knife blade and you are not sure whether there is a piece of the metal left behind. If the magnet is placed over the wound it produces pain when there is a piece of steel left. You can only diagnose the presence of steel and iron. It is of no value where there is a piece of lead or copper in the wound. The X-ray will probably diagnosticate the latter now.

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Spokane, Wash., September, 1906: Denouncing present methods of caring for the insane, which he declares to be crude, inadequate and barbarous, and calling upon his fellow practitioners to urge upon the members of the State Legislature to amend the medical practice act so as to properly define "practicing medicine," Dr. G. W. Libby, of Spokane, President of the Washington State Medical Association, opened the annual convention in Spokane. There was a large attendance of physicians, and there was two special guests, Hon. Albert E. Mead, Governor of Washington, and Mayor Floyd L. Daggett, of Spokane, who both made brief addresses. The former saying he would like to borrow some parts of Dr. Libby's speech and bring them before the next meeting of the Legislature.

"I have undertaken a betterment of the statute law with relation to the prevention of tuberculosis," Governor Mead added, "and I believe that whatever medical science has discovered we ought to adopt. There is only one way to stay the white plague and that is the strong arm of the State, and the Commonwealth should be stretched out as a barrier to stop it."

Dr. Libby did not mince words in his address in speaking of the care of the insane. He said on that point: "Our system of

caring for the insane is inadequate, crude, and in some respects barbarous. The process of law by which the unfortunate sufferer is committed to the care of the State is unworthy of the civilization of the twentieth century ; it is a relic of the dark ages."

He advocated the establishment of an institution for the criminally insane, declaring that a person who escapes the penalty for crime upon the grounds of insanity should not be turned loose to become a further menace to public safety.

Papers were read on the following subjects by the undermentioned :

Discussion on Pleurisy, led by Dr. William Douglass, of Tacoma ; Diagnosis and Prognosis of Pleuritic Effusions, by Dr. H. C. Robins, of Spokane ; Clinical Course and Treatment, by Dr. J. Sutherland, of Spokane ; Discussion, led by Dr. William Shannon, of Seattle ; Angina Pectoris, Pseudo-Angina and Palpitation, by Dr. J. W. Bailey, of Seattle ; Bradycardia, Tachycardia, Syndromo and Arrhythmia, by Dr. William House, of Portland, Ore. ; Discussion, led by Dr. H. W. Dewey, of Tacoma ; Treatment of Organic Heart Lesions, Dr. H. W. Howard, of Prosser, Washington ; Osteomyolitis, Classification, Etiology and Pathology, H. W. Reed, of Seattle ; Clinical Course and Differential Diagnosis, Dr. W. N. Keller, of Tacoma ; Treatment, Dr. A. A. Matthews, of Spokane ; Discussion, led by Dr. E. M. Brown, of Tacoma ; Headache, Significance and Treatment, Dr. S. Sargentish, of Tacoma.

These officers were elected for the coming year : President, Dr. J. H. Lyons, of Seattle ; vice president, Dr. E. L. Kimball, of Spokane ; second vice president, Dr. E. E. Shaw, of Tacoma ; secretary, Dr. C. H. Thompson, of Seattle ; treasurer, Dr. G. H. Greer, of Tacoma. The convention will be held as follows : Seattle, 1907 ; Tacoma, 1908 ; Spokane, 1909.

The officers for the Washington Association for the Prevention and Relief of Tuberculosis are : President, Dr. C. H. Smith, of Seattle ; vice president, Dr. E. E. Heg, of Seattle ; second vice president, Dr. Wilson Johnston, of Colfax, Washington ; secretary, Dr. W. R. M. Kellogg, of Spokane ; treasurer, G. S. Brooke, of the Fidelity National bank of Spokane.

Memberships are in three classes : Yearly members, \$1 ; life members, \$25 ; patrons, \$200. The association will build a sanitarium and enforce sanitary laws.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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F. W. SAMUEL, A. M., M. D.,	{ EDITORS.	O. P. NUCKOLS, M. D., Ph. G.
SAMUEL B. HAYS, M. D.,		MANAGING EDITOR.

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## Editorial.

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*Criminal Abortion.* It is not with a desire to dig up a subject that we could only wish did not exist, to a degree, sufficient at least to call forth discussion, but from a stand-point of general interest to the medical profession that we take up the fight against a practice so pernicious and demoralizing. The criminal abortion is a rapidly growing evil, no observing physician can deny. That it is fraught with many dangers, both direct and indirect is also well known. If we consult the gynecologist he will tell us that a very large per cent. of ovarian, tubal, and uterine diseases are directly traceable to a previous abortion. From a medico-legal standpoint, criminal abortion may be confined to those cases in which an abortion has been produced by another than the patient themselves, and punishable by law, but from a moral and humane standpoint all cases of interrupted gestation by artificial means can properly be construed as an criminal abortion. The subject is susceptible of division into two great classes, the one embracing all those cases in which an abortion has been produced by an abortionist, either under the guise of a surgical operation or otherwise, and the other where an abortion has been produced

by the patients themselves. It is a fact to be greatly deplored that any self-respecting physician should become a *particeps criminis* to such a nefarious practice, yet it is a self-evident fact that it is sometimes the case.

That the termination of gestation is sometimes justifiable no one will deny, but that such conditions as would call for such radical measures are extremely rare, is also very palpable. The question then is, what can be done toward checking this rapidly growing evil?

It is our belief that in general family practice where the physician so often meets with cases of induced abortion, from no other motive than the objection upon the part of the mother to have children, from social reasons or otherwise, it is his plain duty to impress upon such patients, not only the direct dangers, but also the more remote dangers of such practices. A campaign of education by the physicians among the laity would have quite an influence in restraining this evil practice. As to the abortionist, and by this we mean all physicians as well as charlatans who produce abortion, such legal steps should promptly be taken as may be necessary to bring them to justice and stop the practice.

The State Board have already taken the matter up, and their efforts should meet with the aid of every conscientious and high minded physician in Kentucky. The criminal acts of a few rests as a stigma on the profession, and should be met with such means and measures as may be necessary to relegate the whole affair to everlasting desuetude.

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#### NOTES AND PERSONALS.

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##### BYRON ROBINSON.

We wish to call attention to the Byron Robinson number of the American Medical Compend which has done itself proud in behalf of so venerable a man. Dr. Robinson is a man with a world-wide reputation, and this journal feels highly complimented in having the honor of publishing some of his articles.

CONGRESS 1907—CLIMATOTHERAPY AND URBAN  
HYGIENE—CANNES, MONACO, MENTONE, AJACCIO.

The third Congress of Climatotherapy and Urban Hygiene will hold its meeting, during the Easter Vacation 1907, on the French Riviera (that part between Hyeres and the Italian frontier) and in Corsica.

The sessions will be held at Cannes, Monaco, Mentone, and Ajaccio; but all the towns and stations on the Mediterranean Littoral are included in the programme:—Cannes, Nice, Monte-Carlo, Mentone, Hyeres, Antibes, Grasse, St-Raphæl, Juan-les-Pins, Beaulieu, Cap-Martin, Thorenc, etc., etc.

The Congress will last about one week on the French coast, and will finish in Corsica.

The success of the two previous congresses held at Nice in 1904, and Arcachon in 1905, is well known. Without doubt, the third meeting will be in no way outdone by its predecessors. Its programme will be of the best. The organizing committee are busy, the principal points being already settled. Many towns have subscribed important sums,—Cannes, Mentone, and the Principality of Monaco, have promised large subscriptions.

Municipalities and Corporate bodies are preparing to rival with each other, to assure the success of the Congress, and to offer a brilliant reception to the visitors: fetes, banquets, excursions.

A reduction of 50 per cent will be asked for on all railways and steamboats; important reductions will be given in all the hotels.

For all information, address General Secretary,

DR. H. VERDALLE,

1 Boulevard d'Alsace, CANNES, (*Alpes-Mari-times*).

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PURIFICATION OF SEWAGE.

A valuable contribution to the literature on the disposal and purification of sewage has just been issued by the United States Geological Survey as Water Supply and Irrigation Paper No. 185. Investigations on the purification of Boston sewage with a history of the sewage disposal problem, by C. E. A. Winslow and E. B. Phelps. The volume of sewage discharged by modern communities is so large and the character of all kinds of sewage is always so objectionable that the so-called sewage disposal problem becomes, from the economic as well as the sanitary point of view, one of the most serious with which America cities have to deal.



It is of vital importance to every community to secure such a disposal of obnoxious sewage as will avoid the creation of any insanitary focus or foci in the environment, or any infringement of the laws of hygiene and sanitation.

The investigations described in this publication were made at the Sanitary Research Laboratory and Sewage Experiment Station of the Massachusetts Institute of Technology under the direction of Professor William T. Sedgwick. The station at which the work was carried on is situated on the line of the main trunk sewer of the south Metropolitan district of Boston at a point where it contains the sewage of about half a million people. At this station pumps were installed and tanks were constructed for tests of the various methods of sewage purification. The results of this work and the practical conclusions that have been drawn are given in Water Supply Paper No. 185, which may be obtained on application to the Director of the United States Geological Survey, Washington, D. C. These results are by no means applicable merely to large cities, but contains lessons of practical value to all communities having to deal with the ever present sewage disposal problem. The description of the experiments is preceded by a careful and elaborate historical review of the whole sewage disposal problem from its origin in the wide adoption of the water carriage system up to the present time, when that system has become practically universal. The interesting review cannot fail to be of the highest value to expert engineers, sewage commissioners, and cities all over the United States, especially to those numerous small communities that are confronted, perhaps for the first time, with a problem that means so much for the health as well as the finances of the citizens.

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#### WORLD'S FAIR IN 1909.

ALASKA-YUKON-PACIFIC EXPOSITION AT SEATTLE WILL EXPLOIT NORTHLAND AND ORIENTAL TRADE—TO COST

\$10,000,000—QUEEN CITY RAISES \$650,000  
FOR ENTERPRISE IN ONE DAY.

At the present time much interest is centered here in Seattle in the work of creating the Alaska-Yukon-Pacific Exposition, which will be held in 1909. opening June 1 and closing Oct. 15.

Although three years remain before the fair will be opened to the public, the management is hard at work perfecting and

carrying out plans to make the enterprise worthy of the purposes it will aim to accomplish.

Beginning with the idea of making the new western world's fair original in every possible way, the management has succeeded admirably up to the present time, and if the financing of it, which broke all exposition records, can be taken as a criterion of the manner in which the plans already outlined will be carried out, there is no room for doubt as to the originality that will characterize the 1909 fair.

On October 2, last, five months after the incorporation of the exposition company, which was effected May 7, the people of Seattle were called upon to finance the enterprise by subscribing in one day to its capital stock of \$500,000. In a generous and public spirited manner they over-subscribed to the extent of \$150,000, making the total amount available with which to begin work, \$650,000. No other city for any purpose ever equaled such a feat. "Seattle spirit," for which the people of the Queen City are noted, was responsible for this remarkable achievement. More than a half million dollars in one day is a large amount of money to be raised in a city of 200,000 inhabitants. The slogan adopted by Will H. Parry, Chairman of the Ways and Means Committee was "Everybody Helps," and everybody did help with the result that an average of more than \$3 was subscribed for every man, woman and child in the city.

As soon as the capital stock had been subscribed, John C. Olmsted, the noted landscape artist of Brookline, Mass., who laid out the Chicago and Portland Expositions, was called to Seattle, and he is now busily engaged in designing the grounds and arranging the buildings. He has pronounced the site as, scenically, the finest ever utilized for such a purpose.

Henry E. Reed, director of the exploitation, is now busily engaged in making arrangements for the States to participate. He has Major T. S. Clarkson, special commissioner, in the field visiting the governors of all the commonwealths. So far Major Clarkson has met with unprecedented success. Every governor he has talked with has signified his intention of recommending a liberal appropriation for a building and an exhibit. Mr. Reed is also carrying on an extensive campaign to secure the 1909 meetings of national conventions.

The Executive Committee of the Exposition has appropriated \$100,000 for the live stock show, which will be on an extensive scale, and from present indications promises to be the most successful ever held.

The management is receiving letters from all over the country endorsing the object of the exposition, and pledging support from different localities.

The primary purpose of the fair is to exploit the resources and potentialities of the Alaska-Yukon and the Pacific Northwest, and to make room and foster the vast importance of the trade of the Pacific Ocean and of the countries bordering upon it. Different from other fairs, the Alaska-Yukon-Pacific Exposition will not celebrate any particular event. The awakening of the Pacific, the wonderful achievement in all lines of effort of the countries in and bordering thereon, and the important role the commerce of the great ocean plays in that part of the world, are the most noteworthy things the fair will celebrate. It will be a great international exposition. Historical sentiment will not be depended upon to arouse interest and induce participation.

In the first place the fair will show the world, through its exhibits, that Alaska can produce other things besides snow and gold; it will give the general public a better conception of the resources, advantages and possibilities of the territory, and of its geographical and climatic conditions. The same is also true of Yukon.

The Fair will increase the commerce of the Pacific by teaching the merchants and manufacturers of the Orient and Occident the needs of the people of their respective markets, and how to secure and hold the business. Oriental buyer and Occidental seller, as well as Occidental buyer and Oriental seller, will be brought closer together to their mutual advantage, through exhibits collected with that aim in view.

The exploitation of the Pacific Northwest—in fact the entire western country—will be, naturally, another important result that will be accomplished by the Alaska-Yukon-Pacific Exposition. The Lewis and Clark Fair and its attendant publicity placed this section prominently on the map. The interest that exposition created beyond the Rocky Mountains in this section will be stimulated and increased during the next three years. With the foundation in exploitation laid by Portland to build upon, the attendance at the 1909 fair and the subsequent benefits to follow will be on a large scale.

It is estimated that the Fair will cost \$10,000,000. The amount the exposition company will spend and the United States Government and State of Washington appropriations will make

a fourth of this amount, and the sums the states, foreign nations, exhibitors and concessionaries will expend will aggregate the remaining three-fourths.

The exposition site comprises 255 acres of the campus of the Washington University. In its virgin state it presents everything to please the eye. There are tall, stately giants of the forest forming beautiful vistas, gentle slopes, commanding terraces, and unsurpassed stretches of water front.

The grounds border for more than a mile and a half on Lake Union and Lake Washington. The Olympic and Cascade mountains are in plain sight, and an unobstructed view of the perpetual snow peaks of Mt. Ranier and Mt. Baker may be obtained. In constructing the buildings and laying out the grounds every care will be taken to preserve Nature's own handiwork.

Different from former fairs, the Alaska-Yukon-Pacific Exposition includes in its plan the erection of permanent buildings. Many of the large exhibit palaces will be substantially erected and they will remain as the property of the University after the fair closes, to be used for educational purposes. Thus the Washington state appropriation will be used for a permanent good aside from the benefits that will accrue to the commonwealth from the fair. The states and nations will be invited to erect buildings of a permanent character, which will give them an opportunity to install lasting memorials of their progressiveness.

FRANK L. MERRICK.

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THE American Anti-Tuberculosis League will hold their next meeting at Atlantic City, N. J., June 1-4, 1907. Dr. George Brown, President and Executive Officer.

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THE American Medical Editors' Association will hold their next annual meeting at Atlantic City, N. J., June, 1907. Jos. MacDonald, Jr., M. D., Sec'y and Treas., 92 William St., New York City.

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THE editors desire to apologize for the January and February issues coming out late, which was on account of having to move the printing department, but will endeavor to be out more promptly in the future.

## Recent Progress in Medical Science.

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### PATHOLOGY,

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IN CHARGE OF

E. S. ALLEN, M. D.,

*Professor Pathology, Ky. School of Med.*

LOUISVILLE, KY.

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**Alopecia.**—By Dr. Delos L. Parker, Detroit, Mich. (*Medical Record*, February 9, 1907), has been conducting some interesting experiments relative to falling out of the hair. His conclusions are proof positive that dawn is breaking in that obscure field of baldness that has been so barren to all investigation and experiment for ages.

That barren spot that our forefathers have been so kind as to include in their will, and we too adhere to family tendency transmit to our progeny, bids well to be eradicated as a memory of our ancestors. Experiments are proving conclusively that those individuals who fail to bring about a change of the residual air of the lungs are those individuals who have a tendency to lose their foretop. This residual air in the apices of the lungs especially, undergo degenerative changes, and the products of degeneration when absorbed into the economy so influences the nutrition of the scalp hair especially, as to result in an exfoliation.

Numerous observations go to show that those individuals who are negligent in the proper expansion of the lungs, have a tendency to become bald. Why the hair on the top of the head first exfoliates can be easily explained on the basis that constrictions of the temporal and occipital arteries by the hat band produces circulatory disturbances at this most distant point from nutrition, and that the scalp held down by the hard less vascular frontal aponeurosis has a greater tendency to suffer nutritional changes than have those structures with soft vascular muscular tissues beneath as other portions of the scalp and hairy surfaces.

Dr. Parker's experiments in the lower animals seem proof positive of his theory.

Products of exhaled air when injected hypodermically into birds or animals except fur bearing, causes a loss of feathers and hair. Pigeons injected with this product shed all of their plumage, but as soon as the injections are discontinued a new growth



of plumage rapidly makes its appearance. Guinea pigs and dogs similarly treated, promptly lose their coat.

This peculiar substance of breathed air develops when air that has been breathed is kept in a warm and moist place, it is non-volatile and not soluble in water. It is obtained by causing several persons to blow through tubes that pass in under water; the water being displaced from an inverted jar, as the air accumulates at the top.

This material called trichotonic acid is soluble in ether or is obtained by centrifuging the contaminated water and evaporating it when it appears on the bottom of the vessel as a frosty looking substance, and under the microscope takes on the appearance of feathery crystals with a waxy substance incorporated.

This waxy substance, called sterotoxine, is soluble in absolute alcohol and there remains under the microscope a substance that is not dissolved by absolute alcohol. The material soluble in alcohol does not have effect when injected, but the remaining product is the one when injected causes alopecia.

Chemical experiments have demonstrated that this is not a ptomain or alkaloidal substance resulting from bacteria. Air that has been breathed and retained in a warm moist place liberates a substance that causes a falling out of hair when injected. When taken by the stomach it is inert, for a pigeon was made to drink water saturated with exhaled air did not lose any feathers. This substance can be exposed to light and atmosphere without undergoing any change. It develops in from five to twelve hours after air has been breathed. It seems a just conclusion after convincing proof from experiment in lower animals that the stagnant air in the apices of lungs undergoes changes which, when absorbed, influences the vitality of hair.

**Alcohol and its Relation to Epilepsy.**—By Dr. Mathey Wood, Philadelphia, Pa. (*Journal of A. M. A.*, February 9, 1907), has given to the medical public a series of investigations tracing the epileptic to an alcoholic ancestry. By numerous experiments on the lower animals during their mating seasons has demonstrated that the offspring of these animals show nervous tendencies if their parents were under the influence of alcohol at this time. He has also demonstrated that by keeping these animals under the influence of alcohol for long periods, does not influence their progeny if the alcohol is discontinued during the mating season. He gives numerous instances in the human family in which epileptic lesions are traceable to inebriety of the father or

mother, about the period of conception. A most notable example is where an epileptic child is traceable to a debauch of one or both parents at this time. Where both parents are total abstainers but at this period in his or her life where worry or some other condition stimulated the desire to drown care with beverage. For children born before and after this period manifested no nervous lesion, demonstrating that the animal cell must be under the influence of alcohol at the period of fecundation.

Statistics taken from insane asylums and hospitals for epileptics go to show that seventy-five per cent. of these nervous lesions are traceable to alcoholic ancestors. There is some argument and opposition to this however, for an inherited degeneracy originating from some other source, might so lower cell resistance as to allow the appetite for alcohol to develop, and alcoholism is one of the manifestations of nerve degeneration rather than the cause of it. The fact that alcoholism is so frequently associated with the degenerated progeny, leaves no doubt in the mind of the medical man, but that it predisposes nervous lesions, and more especially when the parent is under the influence of alcohol at one specific period of his life. The professional man should educate the public along these lines, warning them what the result might be if sexual intercourse is indulged when one or both parents are under the influence of alcohol.

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## BOOK REVIEWS.

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**Practical Text-Book of Midwifery for Nurses.**—By Robert Jardine, M. D., Edin.; M. R. C. S., Eng.; F. F. P. & S., Glasg.; F. R. S., Edin.; Professor of Midwifery in St. Mungo's College, Glasgow; Senior Physician to the Glasgow Maternity Hospital, Glasgow; Examiner in Midwifery to the Scottish Conjoint Board; Formerly Examiner in Midwifery to the University of Glasgow; Late President of the Glasgow Obstetrical and Gynaecological Society; Author of *Clinical Obstetrics*. With 49 illustrations. Third Edition. London: Henry Kimpton, 13 Furnival Street, Holborn, E. C. Glasgow; 40-42 University Ave., 1906. W. T. Keener & Co., Chicago.

This little book is based on the lectures delivered by Dr. Jardine to the nurses in Glasgow Maternity Hospital. If there is a single phase which could express the general nature of the work it is "aseptic methods in midwifery." Dr. Jardine well says in his introduction that the nurse should be so well trained or informed that she may be able to detect any complication which ought to be reported to the doctor. Discussion of symptoms is

very clear followed by concise and practical directions for treatment in all important normal and abnormal condition. Abortion, management of labor, care of mother and child after labor, and infant feeding are especially well treated for so small a book.

B. L. J.

**Kiepe's Materia Medica and Therapeutics.**—A Manual for Students and Physicians attending post-graduate courses. By Edward J. Kiepe, Professor of Materia Medica in the Department of Pharmacy, and Adjunct-Professor of Materia Medica and Pharmacology in the Medical Department, University of Buffalo. In one 12mo volume of 265 pages. Cloth, \$1.00, *net*. Lea Brothers & Co., Publishers, Philadelphia and New York, 1906.

This is one of the latest and handiest of Lea Bros.' "Epitome Series." Dr. Kiepe has arranged his text in three chapters, with a copious list of review questions at the end of each chapter. Chapter I treats of weights and measures and prescription writing. The latter is concisely and accurately handled. Chapter II is concerned with preparations, incompatibilities, administration and action of drugs treated from a general standpoint; while Chapter III takes up the various drugs alphabetically, giving source, action, use, and dosage. It will be found convenient for quick reference both to student and practitioner.

B. L. J.

**A Text-Book on Physiology.**—For Medical Students and Physicians.—By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology, Johns Hopkins University, Baltimore. Octavo volume of 905 pages, fully illustrated. Philadelphia and London. W. B. Saunders & Company, 1905. Cloth, \$4.00 *net*; Half Morocco, \$5.00 *net*.

When Dr. Howell edited the American Text-Book of Physiology, he accomplished a work which gave promise of being difficult to surpass. His part in this excellent work demonstrated, as its least virtue, that he could command respectful attention in any future publication on this most important and interesting branch of medicine. His latest work on Physiology, "Text-Book for Medical Students and Physicians," has met the highest expectations. Anatomy, histology, and embryology are properly eliminated as far as consistent with the subject.

The physiology of the most important tissues is presented so as to appeal to the most fastidiously scientific reader, and is still interestingly readable, a statement that holds true of few so-called "physiological" text-books.

The special senses, digestion, and the circulation are treated very carefully, especially with reference to latest experimental studies. A prediction that it may be the "standard" for some time is conservative in the praise which it fully merits.

**A Syllabus of Materia Medica.**—Compiled by Warren Coleman, M. D., Professor of Clinical Medicine and Instructor in Materia Medica and Therapeutics in Cornell University Medical College, Assistant Visiting Physician to Bellevue Hospital. Third Edition, Revised to conform to the Eighth Decennial Revision of the U. S. Pharmacopeia. New York, William Wood & Company. 1906.

Coleman's Syllabus of Materia Medica is a handy little volume of 186 pages which can be slipped in pocket or grip as desired. It is one of the "aids to the memory" which is usable and useful. It is the third edition revised to conform to the last U. S. Pharmacopeia. Part II is a classification based chiefly on physiological action, conveniently grouped for symptomatic administration. Dosage also given. Alkaloids, their sources and salts; active principles other than alkaloids; drugs known by common names with medical equivalents; and toxicology are all briefly but practically epitomized.

B. L. J.

**The Human Mechanism.**—By Theodore Hough, Professor of Biology in Simmons College; Instructor of Physiology and Personal Hygiene, Boston Normal School of Gymnastics, and William Sedgwick, Professor of Biology in the Massachusetts Institute of Technology; Published by Ginn & Co., Boston, New York, Chicago.

Ginn & Co., are fortunate in having such men as Professors Hough and Sedgwick prepare a text-book on this subject for general educative purposes. Of the many so-called "Physiologies" used in secondary schools this is by far the most consistent, and almost the only one that would appeal to a medical man as useful, or even true to the facts of modern medicine. Physiology, Hygiene, and Sanitation are clearly handled so as to be within the scope of the secondary student, and nothing is presented that will be found stripped of its truth if the student should desire to pursue these subjects still further.

Too much of the instruction in these subjects has been pruned for the boy and girl who "might be injured morally by too much knowledge." Doctors who are interested in proper instruction in "Physiology" in the public schools should look over this most estimable work.

B. L. J.

**Kimpton's Essential Series—Essentials of Medical Electricity.**—By Edward Reginald Morton, M. D., C. M., Trinity University Toronto; D. P. H., Fellow of the Royal College of Surgeons, Edinburgh; Medical Officer in charge of the Electrical Department, London Hospital; Honorary Secretary of the British Electrotherapeutic Society, etc., with 11 plates and 70 illustrations. London: Henry Kimpton, 13 Farnival Street, Holborn, E. C. 1905. W. T. Keener & Co., Chicago, Ill.

In his treatise on medical electricity, Dr. Morton has very truly presented the essentials of the subject. He has presented it in a very plain and concise manner, and we think his little

work ought to meet with great favor, not alone with the student, but with the general practitioner, who will find it an excellent means of getting at the gist of the subject without a great deal of time or reading. We cheerfully commend it to both student and practitioner.

N.

**Dietetics for Nurses.**—By Julius Friedenwald, M. D., Clinical Professor of Diseases of the Stomach in College of Physicians and Surgeons, Baltimore, and John Rurah, M. D., Clinical Professor of Children in College of Physicians and Surgeons, Baltimore. W. B. Saunders & Co., Philadelphia. Cloth, \$1.50.

While the title indicates that the book is written specially for nurses, yet the work contains much that many physicians do not know, and much that they should know. Like after treatment in surgical operations and nursing in infectious fevers, the subject of dietetics is too often too little heeded by the doctor himself, he trusting to the nurse alone for what he should most thoroughly know. Nurses must know some medicine, physicians should know more of what they shoulder on the nurse. Doctors Friedenwald and Rurah have written clearly and in a concise manner the gist of the subject. Diet for infants, for the aged, and in various diseases are also well treated. The work closes with a fairly complete number of usable recipes. It also will be found to be a helpful adjunct to instructors and students in hygiene.

B. L. J.

**A Primer of Psychology and Mental Disease.**—For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases; Formerly Medical Superintendent of the Eastern Michigan Asylum; Member of the American Medico-Psychological Association; of the American Medical Association; Foreign Associate Member Societie Medico-Psychologique of Paris, etc. Third Edition. Thoroughly Revised, with Illustrations. Pages viii-183, 12mo. Bound in Extra Vellum Cloth, \$1.25, *net*. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This little volume should meet with considerable favor among attendants and nurses for the insane, but being somewhat on the plane of a high-school physiology is rather elementary for unsupported use among medical students, or to merit serious consideration as a text-book in medical colleges, despite its unquestioned value to those mentioned, and the excellent manner in which it is written.

**The Physician's Visiting List.**—1907. Fifty-sixth year of its publication. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut Street.

With the Visiting List in his pocket, and a card-index ledger at home, the work of bookkeeping is diminished by half, the ac-



counts are better kept, and the doctor's income is materially increased. The physician who does not know this by experience, or who doubts it, will find it a paying investment to try. "Fifty-sixth year of its publication" is strong endorsement.

**The Practitioner's Visiting List** for 1907. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea Brothers & Co., Publishers, Philadelphia and New York, 1906.

As the practitioner grows busier and his arduous duties multiply, he feels a distinct need for a book of this character, and none have presented which meet more fully the demands than this, and the fact of its long existence and wide-spread sale, attest its popularity and usefulness.

**Rhythmotherapy.**—A Discussion of the Physiologic Basis and Therapeutic Potency of Mechano-Vital Vibration; to which is added a Dictionary of Diseases, with detailed suggestions as to the Technic of Vibratory Therapeutics. Illustrated. 210 pages. By Samuel S. Wallan, A. M., M. D. The Ouelette Press, Chicago, 1906.

The argument of the work is that nature is an epitome of rhythmic reiteration; health is essential physiology rhythm; disease is arrhythmicvital vibrations, and that death is the final interruption of these vibrations. He says that light and chemism are the results of vibratory impulse, as are all the so-called natural forces. Electricity he cites as an example, as it does not generate either power or motion, but is itself generated. Life and matter are both conditions, and the character of each, the author goes on to say, depends on the celerity of the vibrations through which it originates. "A digression on Diet," "Modern Dietetic Mistakes," "A Defense of Cranks," "A getting Back to Nature," are some of the author's topics, in addition to the above which are suggestive, to say the least. The work merits a reading.

## A STERILE EYE BATH.

An eye bath fashioned from a single piece of aluminum has been introduced by the Kress & Owen Company. That this little device will be well received by the



medical profession is not to be questioned when one considers the many points of advantage this metal cup has over the old style glass contrivance. It is cleanly, unbreakable and can be sterilized instantly by dropping into boiling water. The surgical

bag in the future will hardly be complete without one of these cups, which will give happy results in many an emergency. It will be found invaluable for treating Ophthalmia, Conjunctivitis, Eye Strain, Ulceration, and all inflammatory conditions affecting the eye.

**DIRECTIONS.**—Drop into the eye bath ten to thirty drops of of Glyco-Thymoline, fill with warm water; holding the head forward, place the filled eye bath over the eye, then open and close the eye frequently in the Glyco Thymoline solution.

No pain or discomfort follows the use of Glyco-Thymoline. It is soothing, non-irritating, and reduces inflammation rapidly.

## A RECONSTRUCTIVE TONIC.

For more than twelve years "Bronchiline," advertisement of which appears in this issue, has been recognized as a valuable expectorant. While its action is prompt and reliable in the treatment of conditions indicating its use, there has been a demand and a constant inquiry for a reliable reconstructive tonic to be used in connection with it; a remedy not only to stop the waste of tissue, but to give tone to the functions of nutrition, assimilation and excretion, and cause an accumulation of flesh and increase in weight.

After consultation with leading physicians in different sections, careful laboratory experiments with the various formulæ submitted, and observation of the results attending their use in actual practice, we believe that in the preparation we have named "NUTRIVINE" we present the most elegant and meritorious remedy that has been offered to the profession for wasting diseases, such as phthisis, nervous debility, anæmia, chronic diarrhoea, bronchitis, nervous or flatulent dyspepsia,

chlorosis, and prostration following fever, diphtheria, etc., or any exhausted condition of the system.

Each teaspoonful represents 33½ per cent Pure Norwegian Cod Liver Oil with three grains Hypophosphite Lime, 1½ grains Hypophosphite Soda, combined into an excellent and palatable preparation with malt, wild cherry and sherry wine, so that it will not disagree with the most delicate stomach.

Samples on request to Peter-Neat-Richardson Co., Louisville, Ky.

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### SPRAYING FOR DISEASES OF THE RESPIRATORY PASSAGES.

Dr. David Walsh, senior physician to the Western Skin Hospital, London, writes: Glyco-Thymoline was brought to my notice as an excellent lotion for nasal and oral sprays and washes. On due inquiry it was found to fulfill the two conditions usually recognized by medical men in the United Kingdom as vouching for the character, so to speak, of such a preparation. First, its advertisements are accepted by our three leading journals, the *Lancet*, *British Medical Journal* and the *Medical Press and Circular*. Secondly, its composition is not a secret, its formula being freely published. Under these circumstances I determined to try the effect of this preparation in a few suitable cases. As a general antiseptic that does not coagulate albumen and is non-irritant, deodorant and practically non-poisonous, Glyco-Thymoline has clearly a wide range of usefulness. My own observations, however, have been practically confined to its use in the nose and mouth, with results that have proved satisfactory in every instance, especially in acute coryza, pharyngitis, influenza and septic conditions of the mouth.

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As the colder weather approaches, certain diseases and remedies will be more on the mind of the profession. Among the remedies will be cod liver oil. Hagee's cordial of the extract of cod liver oil compound, is not only one of the most popular cod liver oil preparations on the market, but one of the very best, if not, indeed, the best itself. All the nutritive properties of the oil are retained, and the disgusting and nauseating elements are eliminated. Combined with hypophosphites of lime and soda it offers to the profession a reconstructive of great value. The writer has for some years prescribed it freely, and with great satisfaction.—*Massachusetts Medical Journal*.

W. B. Saunders Company, of Philadelphia and London, have just issued a revision of their handsome illustrated catalogue of medical, surgical, and scientific publications. Beyond question this is the most elaborate and useful catalogue we have ever seen. The descriptions of the books are so full, the specimen illustrations are so representative of the pictorial feature of the books from which they are taken, and the mechanical get-up so entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having, and we understand a copy will be sent free upon request.

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#### AN EFFICIENT MEANS OF RELIEVING PAIN.

A pain which accompanies the intestinal diseases resulting from gripe colds is often severe and requires the use of an effective anodyne. Papine is peculiarly adapted to such needs as it represents all of the pain relieving proportions of opium without its narcotic and nauseating effects. It is apparent that such a remedy has a wide range of usefulness, and that Papine is well appreciated by the medical profession is shown by the place it has occupied in the medical armamentarium for so many years.

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#### “BEAUTY AS A FACTOR IN DISEASE.”

The New York Pharmaceutical Co., Bedford Springs, Bedford, Mass., has just issued a most interesting and instructive booklet under the above Caption, which gives in detail the various methods adopted by the female sex of the many savage and semi-civilized tribes to increase their attractiveness to the eyes of the male portion of their tribe or race.

In some instances this so-called improvement or attractiveness is carried to that degree of regional development that locomotion is impossible. A copy of the booklet will be sent upon application.

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#### MISCARRIAGE.

I have prescribed Dioiburnia and Germiletum in my practice repeatedly, especially the former. As a general uterine tonic it has given more than ordinarily good results, and I carried one patient over the third month of pregnancy who had three times previously miscarried at that period.

DR. C. M. BAKER, Hyannis, Mass.

# THE American Practitioner and News.

“NEC TENUI PENNĀ.”

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“Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.” —RUSKIN.

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## Original Communications.

### CHOLERA INFANTUM OR ACUTE MILK INFECTION.\*

BY J. C. BUTLER, M. D.,  
MOUNTAIN CITY, TENN.

CHOLERA Infantum is a disease peculiar to the summer months, and is found only in children fed on an artificial diet of foods containing milk. It occurs very rarely in children fed upon breast or mother's milk, although occasionally we find cases.

*Causes.*—The specific poison producing cholera infantum has not yet been isolated. In the healthy, nursing child, two forms of bacteria are constantly found in the intestinal tract, these are the bacterium lactis aerogenes and the bacterium coli communis. These are sometimes called the “obligatory milk feces” bacteria. According to the researches of Booker and others, the upper part of the duodenum is quite free from micro-organisms, while the lower part of the small intestines contain considerable numbers of the bacterium lactis aerogenes. The bacillus coli communis has been found chiefly in the lower part of the ileum, and still more abundantly throughout the entire length of the colon. Whether or not the poison is due to a sudden increase in number of these bacteria or their ptomains, produced partly by the continued high temper-

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\* Read before East Tennessee Medical Society at Johnson City, Tenn., Sept. 1906.



ature of the summer and aided by a fermentation of artificial foods in the intestines, or whether it is due to some specific microbe which has its existence only during the warmer months, is still an unsettled question. It is certainly true that we only find it during the hot weather of summer. We find more cases in cities than in the country; always find more cases in the extreme heat of summer. I have had more cases during the month of July than any other month in the year. The children of the poorer classes are more often attacked than those in affluent circumstances, and it is almost entirely confined to artificially fed children; some of the worst cases I have seen was from using condensed milk. It occurs most frequently from the third month of age to the end of the second year; although the bacteria are generally introduced into the system as above stated, they may enter in other ways, as by the anus or by the mouth from the nipple of the mother or nurse, whose habits are uncleanly. An infant may also infect itself from its own dirty fingers, as a great many of them are not entirely free from filth.

*Pathology.*—In children dying from an acute attack of cholera infantum, of short duration, we find a considerable amount of emaciation, much more marked in the face than in the body, the cheeks and eyes are sunken, the fontanel depressed. If the disease lasts several days, the emaciation is extreme, the limbs lose their rounded shape, the skin covering the upper part of the thighs is loose and hanging in folds, the face entirely loses its plumpness and shows extreme emaciation. The mucus membranes of the stomach and intestines are in a condition of capillary congestion, with small hemorrhagic patches scattered here and there. The contents of the intestines are liquid from an excessive secretion of mucus. Peyer's patches and the solitary glands are swollen. There is marked congestion of the mucus membrane of the entire large intestines, this being greatest in the cecum and the descending colon, throughout which ulcers may be found; these ulcers may be single or multiple, and are of varying depth. Examination of the brain shows no specific lesion; occasionally

the sinuses are found distended with blood, or on the other hand a condition of cerebral anemia may exist.

*Symptoms.*—No matter how the poison enters the system, the symptoms of cholera infantum are nearly always the same. Occasionally a mild diarrhœa may precede this sudden onset of the acute indications by a few days. During this time the stools are more frequent than normal and are green. There may be some vomiting after taking food. It is very questionable, however, whether this preliminary diarrhœa is a part of the true attack of cholera infantum. Very often the disease begins suddenly when the child is in perfect health. The first symptoms then are vomiting and purging. The vomiting is intense and continuous. The vomited matter is first composed of the gastric contents, later watery detritus, and finally after there is nothing left in the stomach to be thrown off, the attempts at vomiting continue. The child has nausea of the most intense character. The vomiting is induced by the taking of food or drink; anything put into the stomach is immediately expelled. At this time the child becomes pale, the lips blue, a dark line is seen around the mouth, and the entire body is covered with cold clammy sweat. The evacuations of the bowels become more and more frequent until they become practically continuous. Their character changes with great rapidity from the normal yellow movement of the infant to the thin green spinach-like discharge, and finally an almost continual expulsion of large quantities of water mixed with shreds of mucus, which has the appearance of rice water; these discharges have a characteristic musty odor; they are acid in reaction, are composed of serum, mixed with epithelial cells and full of bacteria. The abdomen in the earlier stages of the disease may be slightly distended and soft, but as the disease progresses it becomes retracted. A marked difference exists in the temperature of the surface of the body and of the interior. Occasionally, during the first few hours, the surface temperature may be above normal, but in the majority of cases it does not run above the normal point. In the algid state of extreme depression

it is distinctly subnormal. The rectal temperature will be found to be anywhere between 103 and 107 F. The average duration of the disease is from one to three days, although cases occur in which death follows within six to eight hours from the beginning of the attack. The loss of flesh is appalling, the child frequently changing from a rosy, plump baby to a mere skeleton covered with skin, in the course of a few hours. Nature is already trying to throw off the poison which is in the system by vomiting and purging. In these cases milk should not be used at all, even sterilized milk is unfit for use. The child should receive no food at all for from six to twelve hours. Occasionally it is necessary to withhold all food for at least twenty-four hours from the beginning of the attack. Small quantities of sterilized water should be given frequently, and a little brandy or whiskey should be added to this for its stimulating effect. I prefer brandy to whiskey. If there is great depression a considerable amount of brandy or whiskey can be given with good effect.

The next indication is to aid nature in freeing the system of the poison which is causing the trouble. For this purpose washing out the stomach and intestines give excellent results. These irrigations should be frequently repeated; of course the water should be sterilized, and is medicated by the use of calomel and bismuth, or a one per cent solution of sodium chloride. I prefer the sodium chloride solution, as I have had better results from its use in my practice. These irrigations not only do good by thoroughly cleansing the stomach and bowels, but also by the absorption of a small amount during each irrigation, which helps to sustain the patient; the system in this disease loses a large amount of water, hence these irrigations help in that way. When the surface of the body is cold the child should be placed in a hot water bath with the addition of a little mustard or alcohol. In some cases putting the child in a hot pack at about 100 degrees F., will do considerable towards maintaining the external heat of the body. Tepid baths with alcohol do considerable good in some cases; they will quiet the patient

considerable and also have a good effect on the nervous system. The stomach and bowels should be irrigated as long as vomiting and purging is present.

In the treatment of cholera infantum, there are only a few drugs which do good. I think when we are first called to see a case, after the stomach has been irrigated, small doses of calomel do good, followed by a small dose of castor oil; then large doses of bismuth subnitrate as soon as the stomach will retain anything; this should be given in very large doses, something like twenty grains every two hours to a child fifteen months old. I have had some good results in the last year from giving the acetazone solution, say about ten grains to a glass of water, give one or two teaspoonfuls every hour. I have also used a tablet put up by Sharp & Dohme, called Cholera Infantum Tablets, which contain calomel, one-twentieth grain, bismuth subnitrate one grain, sulphocarbolate of zinc, one-tenth of grain, and pure pepsin one-half grain, with good results; usually give one of these tablets every fifteen minutes until I give ten or twelve. These seem to control the vomiting to some extent in some cases; sometimes when the discharges are very large, we may use about fifteen or twenty grains of tannic acid to a pint of warm water, injected into the lower bowels; this should immediately follow a copious enema of sterilized salt solution. When the patient suffers a great loss of water which it always does in this disease, and there is a great emaciation and weakness, some advise subcutaneous injections of salt solution, but I have never tried this. For the relief of vomiting, small doses of morphine, given hypodermically, do good by quieting the patient and controlling the vomiting; also small doses of atropine seem to do good by equalizing the circulation; carbolic acid given with glycerine in very small doses seem to do good in some cases. Some physicians recommend the salicylate of sodium in these cases. I have never tried it in such cases. I don't think opium as a rule should be given in these cases although some recommend the use of it. When the surface temperature is very high, the ice cap does

good. No antipyretic should be given, as they do more harm than good. When the temperature is subnormal, stimulants and the hot pack should be used; such stimulants as brandy, whisky, aromatic spirits of ammonia, etc. I have used considerable amount of stimulants with good success in these cases. After the vomiting has ceased, small doses of liquid peptonoids, predigested beef, fresh broths, rice water, albumen water, etc., may be given. Milk should not be given until the child is thoroughly well. When the child is fed by the breast, the same rules should govern it as when fed by the bottle.

There is probably no other disease, with the exception of cholera, in which the emaciation is so extreme in so short a time. The rapid body waste is due to the destructive loss of fluid. As the disease progresses, the respirations become shallow and jerky, and the child passes into a state of coma, convulsions, or rarely, delirium. It is not unusual to find a short interval during which there is a lull in the symptoms; at this point in the disease the child may begin to improve, but much more commonly this interval is followed by an increase of the symptoms of profound nervous depression, the child passing into a state of coma, followed by death. During the entire attack, the thirst is extreme, the child clinging to the spoon or glass when you give water.

*Diagnosis*—The diagnosis of cholera infantum should not be difficult, the history of the disease and the intensely acute onset resembling no other intestinal disease, except asiatic cholera; when the latter disease is epidemic, it can only be settled by a microscopical examination. It sometimes resembles an attack of sunstroke in a large degree, but the high temperature in sunstroke ought to be sufficient to settle the difference.

*Prognosis*.—The prognosis of cholera infantum is always grave. If while the attack lasts the child is fed on milk, the disease is nearly always fatal. The prognosis is naturally more favorable in strong healthy children than in those who have always been more or less delicate. A long continued use of artificial food seems to make the



prognosis less favorable. The symptoms on which to base a favorable prognosis are a slight attack and rapid and steady decrease in vomiting and diarrhœa, the absence of profound nervous depression is also favorable. We need not expect to save many of these cases until we find out more about the disease and treatment.

*Treatment.*—The first indication in the treatment of cholera infantum, the one that is of the greatest importance, is to remove the source of poison. This is caused by milk infection, hence all milk should be immediately stopped and such foods as contain milk. We should be very careful to instruct all of our patients, who have the care of little ones, the absolute necessity of perfect cleanliness of the breast, and also should impress upon them the absolute necessity of keeping the bottle when it is used thoroughly clean; also not to use any bottle with a long nipple as it is impossible to keep them as clean as they should be; the best form of bottle to use is the one with the short nipple that fits over the neck of the bottle. We should also have them keep the baby's mouth washed clean every day with some preparation like glycerine and listerine.

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### EMERGENCY SURGERY.\*

BY F. W. SAMUEL, A. M., M. D.,  
LOUISVILLE, KY.

*Mr. President and Fellows of the Lawrence Co. Medical Society.*—

My first and most pleasing duty is to thank you for the honor of addressing you. When your very kind Secretary invited me to address you I suggested when I accepted that he would suggest some subject that would be of especial interest in arousing a discussion from all of the members. When he suggested "Minor Surgery" I was impressed first with its practical aspect, but after a few minutes reflection I realized its enormous dimensions and felt that if I were able to take up this subject in its entirety my paper would necessarily be reduced to a series

\* Read before the Lawrence County Medical Society, Bedford, Ind., April 5, 1906.

of aphorisms. I therefore requested him to allow me to consider a few very common and practical conditions, which are constantly arising with the general practitioner wherever he may be located, which lesions are usually, strictly speaking, emergencies. I therefore invite your attention to such facts as should, in my opinion, obtain in order to successfully handle with facility and preciseness emergencies which are constantly arising in our daily work.

In these days, where corporations in large cities regularly engage the services of a surgeon to attend and take care of all injured persons in their employ, many questions arise that give at times great trouble in the matter of ethics. This seems to have arisen largely, formerly, on account of the unwillingness on the part of the employed to abandon his family physician. However, this condition is now rapidly passing away, because the mass of the working classes are taught the economical side of this question, and have found out that their injuries are well taken care of by the contract surgeon, and they are usually favored with the continuous patronage of the company if they are sensible as to the situation, and do not later show signs of disturbing the corporation in a legal way.

It has always obtained that the injured person has the right to select his attendant from a medical or surgical aspect, but I am of the opinion that the physician will gain much more than he loses by his assistance in keeping these cases in the hands of the corporation surgeon, where he has been fortunate enough to render first aid, and to always offer to retire from the case in favor of the corporation surgeon where they have rendered first aid. There are many points in the ethical situation which must necessarily be brought out in the discussion, as I feel sure that difference of opinion will exist here as it has with those whom I have been associated with.

The next most important question that we must deal with is what preparation should be constantly at hand in order that the busy practitioner may readily meet, and successfully treat emergencies and their complications that

arise in emergencies. It is an axiomatic truth that in accidental injuries complicated by open wounds that the fate of the patient may, yes usually does, depend upon the character of the first aid rendered him. Therefore the first dressing applied should be done with every precaution known to modern surgical technique, even though this be a temporary dressing. Much has already been accomplished in this direction in large corporations by having a room especially fitted up and equipped with surgical dressings, and specific directions to the non-medical to apply the same with what technical knowledge they obtain from the surgeon in charge. The surgeon should have a liberal supply of aseptic and anti-septic dressings in addition to such instruments as are usually found in many emergency cases, which instruments should be carried so as to readily sterilize them at any place an emergency occurs. In addition to this he should have ligatures, cotton, a jar of anti-septic ointment, a bottle of dusting powder, soap and brushes.

Turning now to the more practical side of my subject, statistics seem to show that more than ninety per cent. of deaths usually occur from a few minutes to within 24 hours of the accident. Therefore to those who are seriously injured the first aid should be simple as possible. The subject that will engage our attention is one that commonly occurs as frequently as any other, at a distance from crowded centers, and that is burns. No subject has engaged the attention of the local surgeon more than burns. And the multiplicity of remedies and the character of treatment in the past is more bewildering to the young physicians in looking over this subject from a text-book stand-point. In order to be thoroughly understood on this subject, I would have you to consider that a burn is a wound. In order to get the very best results, it should receive the same careful attention that we give to the subject of wounds. The first attention required in burns is to relieve pain, whether it be of a superficial nature and extensive, or whether it be circumscribed and very deep. After relieving pain we should at once proceed to cleans-

ing the part. After trimming away all dead tissues, the surface should be washed and gently scrubbed with gauze or a cotton mop. All foreign bodies should be removed. In burns of a very superficial nature and extensive, where the exudation of serum is expected, the liability of infection is very great. Here sterate of zinc and balsam of peru make a most excellent dressing after thoroughly cleansing the surface. This is then covered with a liberal layer of gauze and cotton. This dressing should be removed in 24 hours and thoroughly irrigated. When infection occurs in these cases it is usually due to the staphylococcus albus. The application of pure carbolic acid in these cases, as a dressing, possibly owes its good effect to the germicidal effect. If it should occur in the wake of such a burn it has been my rule to use it in a strong solution. In all burns where necrosis is a feature, the daily removal of all necrotic tissue, in order to avoid contamination of the rapidly healthy forming granulation tissues. I regard it as a mistake to allow the first dressing to remain upon a burn until separation takes place.

Possibly wounds in connection with fractures, mashed fingers, and injuries about the head, form a most important class in emergency surgery. In all wounds of the hand it is hardly necessary for me to add here that the greatest amount of conservatism is demanded. I shall only speak of the wounds in general. To the surgeon there are but two classes of wounds that present to the surgeon as an emergency. That is, the infected wound and one in which infection has not apparently taken place, the so-called non-infected wound. In all wounds occurring from machinery, one of the most noticeable features is the amount of grease, dirt and foreign bodies which are incorporated in the irregular torn structures. The fact that these structures in and about the wound, though they may retain temporarily healthy are, to a large extent, devitalized and die. The resulting slough, being the most inviting structure for infection, therefore, a great deal of care necessarily must be given to such a class of cases, such as trimming away such tissue as will certainly perish and

become anidus for infection. My idea is based upon the principle that all wounds, whether infected or not, should receive in their primary state the most careful and delicate treatment, for it has become a known fact that in the treatment of wounds one of the greatest errors that we formerly made was the irrigation or application to the wounded surface, strong anti-septic solution. Mercuric solution standing at the head. Such solutions produce a superficial necrosis, thereby harboring germs and destroying temporarily paralyzed cells which would have been of a decided potential value in resisting the invasion of micro-organism, even though they had not been removed. I take it therefore as a law that a fluid should be used which has a very mild anti-septic value, and its highest aim should be non-irritating. But its value depends in its mechanical removal of all foreign bodies, whether they be micro-organism or dirt. With the removal of all tissues that will die, the protected wound under these circumstances is left in the best possible condition with nature's forces to repair itself.

In all wounds that are infected to such extent that suppuration is free, a very decided course must be taken on the part of the surgeon to prevent farther loss of structure by the rapid involvement of the contiguous tissues by the extension of the inflammatory process, and the resulting necrotic process. Such wounds have, in the past two years, been managed by myself in the following manner, which attains even as successful a result as in the management of abscesses. The method is as follows: the wound is wiped briskly with a gauze mop. All slough not removed by this form of mechanical process is then gently trimmed away with scissors until the healthy surrounding tissues are reached as is shown by bleeding. The wound or abscess is now flooded by pure carbolic acid, using precaution to prevent it running extensively over the skin. This is allowed to remain about thirty seconds; it is then mopped up with a sponge made with cotton, and the wound is now flooded with ninety-five per cent. alcohol to prevent any toxic effect which, in my opinion, is very un-



likely to occur. The wound is now packed quite lightly with strips of gauze, and the major portion brought together with sutures or adhesive straps, allowing a liberal quantity of the gauze to protrude through the most convenient and dependent portion of the wound. In order to get rapid drainage by its capillary action, which catches in the gauze meshes much detritus, bacterial products, acting in this way as a gill net. Usually a wound thus treated will, in forty-eight hours, show a perfectly uniform granulating surface which is healthy and ready to repair.

The next subject which we must consider in emergency surgery, is shock. In a lesser or greater degree shock attends all injuries. Frequently it is the immediate condition which will demand the attention of the surgeon by its seriousness, taking precedence of the real condition to be later combated. Much has been recently said in regard to shock, especially as to its management. That alone will engage our attention; for I shall spare you the tedious discussion as to its physiological phenomena and their not yet well understood causes. The physician meets shock under two circumstances: shock with and without serious hemorrhage. Prolonged and very profound shock often does occur, and is the actual fatal element in many cases, and demands treatment different than that attended with hemorrhage. I am quite in accord with those who follow the teachings of Crile, that we are wrong in our estimation of drugs in the management of this condition. In the treatment of these two conditions. I follow the management outlined to you now, which will best serve my purpose rather than go into the details of why I have abandoned certain drugs, which in substance, and which states my reason fully, is that clinical experience has proven to me the worthlessness of them. In the first condition, shock without hemorrhage, I regard as paramount importance is the application of heat; nor is it necessary to burn the patient to get heat into him. The next most important therapeutic measure is to follow the teachings of Crile; actually tighten up your patients arteries. This you can't do by giving injections of strychnine; you can't

do it by injecting whiskey; they only burden a poor flagging heart. But on the other hand you can, by the injection of the suprarenal extract, forcing blood back to the heart. It needs nourishment, and by the injection of caffeine you stimulate, without beating, the fatigued heart. If you have at hand a Crile jacket, the drugs may not be necessary. If this is not to be obtained, in addition to the therapeutic measures I have mentioned, bandaging the extremities will greatly facilitate the chances of recovery. When reaction has been obtained, good judgment and experience will dictate the necessary measures indicated in the second condition mentioned by me. Shock with hemorrhage or loss of blood, the same treatment being as to therapy obtains. But the use of bandages to retain blood, actually within reach of the feebly contracting heart, is absolutely essential. But in addition to that I regard the intravenous injection of the normal saline solution as the greatest benefit we have at hand. In cases of shock, prolonged with hemorrhage, which are not in-extremis, we may compromise on hypodermoclysis. I am still of the opinion that operative procedure should never be begun where a very marked degree of shock exists. However, I would not, on the other hand, delay the procedure longer than to recognize the actual effect of the applied treatment. This may fall short of decided reaction.

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#### TREATMENT OF ACUTE DIFFUSE PERITONITIS.\*

BY A. D. WILLMOTH, M. D.,  
LOUISVILLE, KY.

THERE is perhaps no question in modern surgery of greater interest and importance, and about which there has been greater disagreement, and from which the mortality is higher than in acute diffuse peritonitis.

The extremely high mortality made the subject of such vital importance that it was one of the six subjects that was considered by the International Society of Surgery at its first triennial congress, held at Brussels, in September

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\* Read before the Louisville Clinical Society, December 4, 1906.

of last year, in which 500 of the most prominent surgeons of the world were present.

Frederich, of Leipzig, who opened the discussion, called attention to the fact that peritonitis is not one disease, but many, or what is more, properly speaking, a serious complication, and too often a terminal event of many widely differing pathological conditions, many of which in themselves not dangerous to life, others are, if unrelieved, necessarily fatal, examples of which are seen almost every day by the abdominal surgeon in inflammations of the vermiform appendix on one hand and intestinal obstruction on the other. The gross causes of peritonitis are therefore many, and their prompt and appropriate treatment in very many cases prevent the onset of, or arrest at a very early stage, the peritonitis which otherwise threatens the patients life.

In order to obtain a thorough knowledge of this subject we must first have thoroughly fixed in our minds the means by which the peritoneum may become infected, and how it cares for it when it becomes infected. The first may be summed up as follows: (1). The most common cause of peritonitis is undoubtedly the extension of the trouble from conditions arising about the vermiform appendix. In the majority of cases the trouble is limited by adhesions, while in others perforations are followed by such a violent inflammation that the whole peritoneum becomes involved. (2). The next most common cause is perforation of a gastric or duodenal ulcer, or perforation following the many other causes that all are familiar with, such as rupture of a cyst, or abscess. (3) By the passage of the micro-organisms from an inflamed but not perforated hollow viscus, cyst, or abscess. (4). By the indirect infection of blood extravasated into the peritoneal cavity in too great a quantity to be disposed of by the natural absorptive agency of the peritoneum. (5). By infection by the way of the blood stream as in septicæmic peritonitis.

While these are important for us to know there is still a far more important point for us to consider, viz: The

nature of the infection, what are the micro-organisms that are responsible for the peritonitis arising from the several causes, what is their relative frequency, and how may they be scientifically dealt with? It stands to reason that if we can demonstrate a number of bacteria to be at different times, and from various sources, the cause of peritonitis, and can recognize that a given case is due to the presence of one or the other of these organisms, either by the symptoms, by the conditions observed at operation, or by rapid bacteriological methods.

We are certainly in a much better condition to treat the peritonitis and to give a prognosis after dealing with the source of the infection.

None have done more along this important line of research than Dudgeon and Sargent, whom I shall quote freely. An examination of the literature on the subject can well be said to have been in a complete confusion, but by their patient work the following important facts have been demonstrated; first, that peritonitis from its several causes is due to the following organisms named in order of their frequency—*staphylococcus albus*, and the colon bacillus. After these may be placed the *streptococcus pyogenes*, *bacillus pyocyaneus*, *pneumococcus*, *gonococcus*, and rarely the *staphylococcus aureus*.

They have also disproved the theory (for it was only a theory), that the pyogenic organisms were the commonest causes of peritonitis.

While they placed the *staphylococcus albus* at the head of the list it was because the organism was the one most frequently found in the peritoneal cavity. It appears however to exercise an influence that is the reverse of harmful, for it undoubtedly provokes the appearance of an exudate containing vast numbers of phagocytic cells, and it is upon the presence of these cells and their power of dealing with the organisms that the chances of recovery depends.

The colon bacillus in one or other of its varieties is the commonest causative agent of peritonitis and may exhibit

a degree of virulence second only to the streptococcus pyogenes.

The type of peritonitis which it gives rise varies according to many factors. The one of greatest moment, however, is the degree of virulence.

While another, that cannot be placed far behind in importance, is the time which the peritoneum has had to bring into play its natural protective mechanisms. An unprepared peritoneum which has suddenly launched upon it, an especially virulent form of infection is much more likely to end fatally than if there had been previously a slight or so-called chronic inflammation, for while it is true that an uninjured endothelium can and will dispose of bacteria and other foreign substances (within limits of course), by the lymphatic route through the crura and central tendon of the diaphragm, the patient's safety fortunately however does not depend solely upon the integrity of the endothelium, for there is also in most cases a protective fibrinous deposit, gross or microscopical, which limits absorption into the peritoneal blood vessels, and at the same time prevents the further egress from the lumen of the intestines.

The absence of this fibrinous deposit in rapid cases of infection, such as those caused by the streptococcus, denotes the absence of an important barrier to general infection by the way of the blood stream, and the fatality of these cases as is well known is disproportionately great.

While the mechanical protection offered by the fibrinous deposit cannot be doubted, there is still another possibility that this secretion poured out by the omental vessels has some antitoxic action, for while germs are not always destroyed they are certainly known to become less virulent.

In order that we may fully understand the method of treatment outlined, it is necessary that we study for a few moments the functions of the omentum; it is known to possess at least five important functions: (1). Circulation. (2). Absorption. (3). Cohesive and adhesive properties. (4). Protective role. (5). Supplemental function.

In the study of these five great functions and their ap-



plication in the treatment of this fatal disease, we recognize the first, or that of circulation, as being the one of greatest importance, as all the rest depend more or less on this one for their effect.

Physiologists teach the importance of correlation between the intra-peritoneal circulation and external conditions. Necessity demands, for relief of external tension, that some part of the circulation be capable of storing up blood. This the intra-abdominal vessels are alone capable of doing safely, being aided by the sensitiveness of the splanchnics to reflex irritation.

The omentum with its loose tissue and numerous vessels plays an important part, for it is through this great vascular system that the second function, in conjunction with the lymphatics, is carried on.

This absorption is not only fluid, but insoluble. Muscatello and Salzel believe that the solid particles are carried by the wandering cell to the lymph stream, and the fluids largely by the blood.

It is generally believed that whatever absorption cannot take place by the lymphatic channel will be done by means of the blood stream if the endothelium is damaged, hence the importance of preserving this delicate membrane, thereby preventing a general infection by the vascular route. The cohesive and adhesive tendencies of the omentum are properties peculiar to itself, and explain to the abdominal surgeon how nature saves many a life. The first property or that of cohesion is first evidenced in foetal life, when the mesogastrium unites with the mesocolon, either through degeneration and absorption of the endothelium or more likely a retrograde metamorphosis of endothelial into connective tissue corpuscles. In advanced life the same tendency is noticed when the omentum becomes incarcerated in a hernia.

The adhesive tendency is probably the result of an exudate on to its superficial structures of white blood cells and fibrin which produce a stickiness. This leads the omentum to become attached to the offending portion and encapsulate it, and the cohesive closes many apertures in

the abdomen where the omentum has been forced by intra-abdominal pressure.

A thorough knowledge of the above bacteriological and anatomical facts are necessary in order to understand the disease and to apply the rational treatment. It was the knowledge obtained by the study of these facts that led Murphy and others to completely revolutionize the treatment of this dreaded malady.

Those who have practiced medicine for the past score of years have seen the domain of surgery constantly enlarging with a corresponding restriction of the field of purely medical treatment. In most cases, however, it will appear upon investigation that surgery has not supplanted medicine in cases in which the latter was therapeutically effective, but in only those diseases in which it offered but faint hope of a cure.

In no condition has this been more marked than in the treatment of peritonitis. The hesitancy with which the surgeon invaded the peritoneal cavity twenty years ago is more than equalled by the readiness with which he explores, repairs, and removes therefrom diseased and offending structures at the present time. The peritoneum is no longer a forbidden ground; aseptic surgery and improvement of surgical technique have done so much in the successful prevention and treatment of peritonitis that a discussion of the medical treatment should and will be limited in the future to a discussion of such treatment as applied to non-surgical forms of the disease and such types as, while amenable to surgery in their inception, have progressed beyond that point.

Even in these cases medicine offers so little in an effective way that the physician frequently permits the surgeon to explore the case, hoping that it may after all be a type amenable to surgical treatment.

Previous to the year 1900 surgical treatment of acute diffuse peritonitis was attended by such a high mortality that the results obtained neither tended to establish it as the method of choice or to furnish an agreeable retrospect to those of us who now "know better."

It was no wonder they were viewed with dismay by the surgeon when the mortality rate approached nearly 100 per cent. A more thorough knowledge of the condition, both from an etiological and bacteriological standpoint, demanded that the patient be given a chance for his life, a chance which surgery alone could offer, and the necessary knowledge for the proper application for such means of relief were acquired very slowly and at tremendous cost.

Actuated by a sense of stern duty, regardless of consequences to himself or to his professional reputation, the surgeon operated on such cases as were not actually moribund, employing the methods which at that particular time were accepted as correct; and was then compelled in most cases to watch the steady and relentless progress of the disease to a fatal termination. During this period of discouraging experiences, the surgeon gladly welcomed and adopted any suggestion as to the management of these cases which offered the slightest benefit in the hands of trained operators.

Indeed a long road was travelled and the stops were many between a complete evisceration and merely opening up the cavity as is done to-day.

The surgical world was startled by Dr. George R. Fowler, of Brooklyn, in 1900, when he reported a series of nine cases, all of which recovered, and described his post-ural post-operative treatment. No one had ever before been able to report such a series of cases; in fact, it may well be doubted whether any one man had up to this time so many recoveries.

This report came with such telling force that the vista suddenly opened up before us, seemed too good to be true. Knowing as we did the physiology of the peritoneum and that absorption took place more rapidly in the diaphragmatic region and diminished as we approached the pelvis where a very slow absorption took place, it is indeed a wonder that some one prior to this had not suggested the elevation of the head and trunk, thereby draining the high and extremely dangerous part of the cavity with its num-

erous mouths hungry for septic material into the lower and safer area, where absorption through lymph channels will take place no faster than the escape of poisons through a well placed drain.

There is at least two points that have contributed so much to the success in the treatment of this dreadful disease, and upon which all are practically agreed, viz: Free drainage and the Fowler position.

While it is true that the methods of drainage differ somewhat, all use it and place it in the pelvis and other regions as indicated.

Some days ago, while in Chicago, I was very agreeably surprised to hear Dr. Murphy state that in his last thirty-six cases of suppurative peritonitis he had only one death and that from double pneumonia, and that occurred six days after the operation.

He went so far as to state that he believed that if he could see the cases early he could save every one. His method consist of nothing new, only an assembly of the good things to do and the elimination of the harmful ones. To be very brief it could be classed under four heads, as follows: Tube drainage in pelvis; Fowler position; procitilysis; and anti-streptococcus serum, but a full exposition of his treatment is as follows: First, simple incision with simple drainage placed in pelvis and such other fossæ as seem to require it. Perforation should be closed and the appendix removed if it be the offender, provided these things can be done without too much handling of the viscera.

The mere making of the incision and relieving of the tension no doubt in many cases works to a very great advantage, for it is a well known fact that this limits absorption and also decreases the virulency of certain forms of infection. (2). Drainage by a tube of the lowest portion of the pelvis through a suprapubic opening and free drainage through the operative incision with a drainage so arranged and the patient placed in a Fowler position, the fluids in the peritoneal cavity will gravitate toward the pelvis, and the action of the diaphragm during respiration will help to pump the fluids in that direction.

If there is sufficient fluid in the pelvis to fill the tube, each movement of the diaphragm will pump a certain amount of it out which will be absorbed in the dressings. It must be remembered that it is not the quantity of fluid that is so harmful, but rather the extent of the peritoneal surface which comes in contact with it. A quart of pus in a round cavity will be less dangerous than an ounce thinly coated over the peritoneal surface.

Another advantage in this line of treatment is the short anæsthesia required, thereby decreasing the chances of shock and vomiting after operation. The question of shock is an especially important one in these cases for it is well known that patients with acute diffuse peritonitis stand long operations badly and short operations well.

Murphy's method of introducing large quantities of saline sol. into the rectum is novel. He inserts a nozzle containing three or four openings into the anus to which is attached a rubber tube leading to a bag. This bag is filled with water and elevated just high enough to make the solution flow into the bowel, the idea being to allow it to flow only as fast as it is absorbed by the bowel. The object of having several openings in the tube is to allow the gas to pass out at one opening while the water is flowing in at others, and if it is decided to stop the flow of water the tube is disconnected from the nozzle, thereby preventing the irritation that would be caused by the frequent introduction of the tube at each time.

By this method large quantities of water (four to eight gallons) will be absorbed within the first few hours after the operation. This absorption does two things: (1). It converts the peritoneal cavity from an absorbing surface to a secreting one, and the fluid poured out by the lymphatic mouths runs over the surface and into the pelvis and out at the site of the drainage carrying with it the infection. (2). The large amount of fluid in the body stimulates the heart and kidneys and increases largely the amount of urine passed, and in this way removes large amounts of infection.



By stopping the food the peristalsis is stopped, and by doing this the dissemination of the poison is prevented.

In those cases the result of streptococcic infection the anti-streptococcic serum should be used, but the indiscriminant use of antitoxic sera without regard to the bacteriology of the case is to be deprecated as being as useless as it is unscientific.

As most cases are the result as above stated to be caused by the coli bacillus then a multivalent anti-bacillus coli serum should be tried, such a serum can be had at the present time from a London house, but is not as perfect as it should be.

Enterotomy and enterostomy in some cases are beyond doubt called for to relieve the gut of its contents that will later on be absorbed if not removed.

I have treated two cases by the method advised within the past month, both following appendicitis, one in a girl that recovered, the other in a young man that was practically moribund at the time of the operation, and only operated on at his most urgent request; this case died about twelve hours after operation.

#### DISCUSSION.

DR. W. H. WATHEN: Just at the present time Dr. Willmoth could not have offered to us a subject that is of more interest to the profession and one that is being more rapidly developed. I congratulate him upon the excellent presentation of the various forms of this subject. Notwithstanding the fact that we have made, in the last few years, very great progress in the surgical treatment of peritonitis, local and diffuse, as the doctor has discussed it, we are still far from any fixed principles in the treatment of these conditions that have been generally adopted.

Murphy has reported more successful cases of what is called diffuse suppurative peritonitis than any one else. I think instead of thirty-three cases he reported at a recent meeting I attended thirty-six. Of course a death from pneumonia is not to be charged against the operation as the patient had recovered from the peritoneal trouble, and the other was a complication arising possibly from some other cause.

I know that Murphy has been criticized in relation to these

reports as not having with sufficient detail shown the character of infection from which these patients suffered. We all know that if we have cases of even diffuse suppurative peritonitis with a reddened condition of all the peritoneum, provided there are no extension adhesions and provided the toxins of the pathogenic bacteria have not invaded the system so as to produce a marked toxemia or septicæmia, they will necessarily all get well if we make an opening in the lower part of the abdomen and drain the bottom of the pelvis with a germ tube. But where you have extensive adhesions in diffuse peritonitis, or where you have a destruction of the endothelial cells and absorption into system in a very marked degree of the toxins or of the germs, or of both toxins and germs, the case is an entirely different one, and I do not believe that there is to-day upon record any case where it has been positively proven that in a diffuse peritonitis caused by the streptococcus pyogenes with marked invasion of the toxins or the pathogenic germs that has ever recovered, and I doubt if there ever will be one unless perchance we are able to manufacture some serum that will antagonize the toxins and further production in the system of the by-products of bacterial growth. I do not believe that up to this time an anti-streptococcic serum has ever cured a patient, because we know that the streptococcus has a number of varieties or strains, and though we may be able to demonstrate a streptococcic infection after an operation we cannot determine the strain. The multivalent serum has not been a success. Therefore, we may use a streptococcic serum that will in no way neutralize the toxin or destroy the germ. The fact that we have a diphtheritic serum that is used with positive results is an entirely different thing, because there are no varieties of this germ and it simply acts logically, and it acts perfectly, unless the pseudomembranous angina is caused by the streptococcus.

The first case of diffuse suppurative peritonitis that I treated successfully was in 1889 when I operated upon a boy for appendicitis with an immensely distended abdomen, temperature 104 and a pulse 140. When I opened the abdomen I found pus in every part of it with adhesions nowhere. I placed drains of gauze and left the wound open believing that the boy would be dead the next morning. The next morning at ten o'clock I found him reading the newspaper without any fever or acceleration of pulse. Now these are the cases that get well. Again, we do not always know if all of the peritoneum is involved. I

dare say that Dr. Willmoth cannot tell us in his case if all of the peritoneum was inflamed. Dr. Willmoth cannot tell us if it was a virulent form of streptococcic infection. There are many forms of infection. There are many more than have been enumerated by Dr. Willmoth. Many of the virulent forms are mixed forms of infection. But whenever we find a diffuse infection of the peritoneal cavity where many adhesions form, where there is extensive invasion of the system with a toxemia or septicemia, you will see that they will all die following any method of drainage.

Fortunately the intensive invasion streptococcus is not a frequent pathogenic organism in this disease. It is a milder form and it is only the exception that it is streptococcic, and the best treatment is this, open the abdomen and remove tension, relieve pressure upon the peritoneum so as to cripple it no more and allow it to regain its power of resistance—and it is a very resisting structure, one of the most resisting to bacteria in the whole human body—and commit just as little traumatism as possible.

DR. SATTERWHITE: I just want to speak with reference to one point only, and that is the intense suffering in the past on the part of those that are operated on by laparotomy from thirst. This practice of Murphy of introducing water continuously into the rectum for absorption will unquestionable allay that to a great extent and the suffering will be mitigated. I really have seen such sufferings from want of water that I am satisfied—and I have so heard them express themselves—that they would rather die than not have their thirst quenched.

I would like to know of those who have performed these abdominal operations whether or not it will allay as it is said it will the thirst in those cases.

DR. ALLEN: In reference to the streptococcic serum that Dr. Wathen referred to I think that possibly a multivalent serum will be the proper serum. I think the mortality is so great in peritonitis, especially a peritonitis due to the streptococcus, because the abdomen is opened up too late and the patient has absorbed already a full dose, and even if operated on the patient is so much intoxicated that it is a question of time as to how long he is going to resist the poisons already absorbed. However, if the abdomen is opened up early and no adhesions are found, and a drainage tube is placed in it, will limit the absorption of the toxins, or the absorption may cease and the patient

will recover if he has not already gotten a fatal dose before the operation.

I saw a case of streptococcic infection last fall that Dr. Price operated on. He opened the abdomen from the pubis to the ensiform appendix. He wiped the lymph off with gauze. It is a question whether one does good or harm in handling the peritoneum. After Dr. Price had opened up the abdominal cavity and flushed it out and mopped out the material, he placed gauze and tube drains in and did not introduce sutures at all. He covered the intestines with gauze saturated with a weak bichloride solution and dressed the wound three or four times a day. This patient recovered. Possibly the patient generated an immunity and overcame the infection. The patient was operated on later and closed up. I saw the case all through and at these frequent dressings you could see the omentum and intestines distinctly through the wound. He claims that he has gotten good results in these cases.

DR. W. H. WATHEN: How much pus was there when the abdomen was opened?

DR. ALLEN: You could see a little pus coming out and there was lymph over everything. The patient's pulse was quite rapid. There was no distinct pus; it was a serolymph material. A microscopic examination demonstrated the streptococcus pyogenes. He almost eviscerated the patient and mopped out and washed with a weak solution of the bichloride, and then placed numerous drains, both tube and gauze, not introducing any sutures.

DR. ABELL: About two years ago—I think it will be two years in February—I reported to this Society three cases of diffuse suppurative peritonitis that I had treated by irrigation. I first washed out the cavity thoroughly with saline solution, put in drains and put the patient in the Fowler position with continuous irrigation in the colon. Of the three, two recovered. One died of obstruction on the sixth day refusing to have the abdomen opened.

A short time after that I was called to the country to operate on a case of appendicitis. It had ruptured. Not having the saline, I, however, employed the technique of Murphy and placed a drain in the lower portion of the abdomen and placed the patient in the Fowler position and used continuous flow of saline into colon. This man made a better recovery than the other two.

Since then I have employed it in six instances—four from

ruptured appendices and two from gunshot wounds. One was operated on eighteen hours after the formation of the injury by a large caliber bullet. It was down in the country and I did not see the patient after the operation. After repairing the perforations the man had a tube placed in the lower portion of the abdomen without irrigation and was placed in the Fowler position. He lived until the evening of the seventh day. What his death was exactly due to I do not know. I never saw him after the operation.

The other case of gunshot wound was operated on fifteen hours after the injury and he had a peritonitis. After the repair of the wounds in the intestines he was placed in the Fowler position with a tubular in lower abdomen and large quantities of saline by bowel and he recovered.

I have had four cases of diffuse suppurative peritonitis due to appendicitis treated in this way. Three made uninterrupted recoveries and the fourth one, operated on the first week in November, died last Tuesday from septicæmia.

Of the entire nine treated by this method, the first three were irrigated and the last six were not. Of the entire number six recovered and three died. The death in neither of the three instances was due to the peritonitis. In one instances it was the result of obstruction. In one case of shot gun wound the patient died on the seventh day—I am not sure of the cause, and the last one died of septicæmia. In two of these cases the anti-streptococcic serum was used. Both recovered. Whether the serum was of use in the recovery I cannot say.

One thing that impressed me was the tremendous amount of the saline solution that these patients take up. The last case took up nine gallons in 24 hours—an average of three pints in each hour. In the next 24 hours, however, the amount was not so large.

From my personal experience with this method it gives better results than any method I have employed before. The patient is subjected to little traumatism, the operation is easily and rapidly carried out, and the subsequent relief and comfort are not only gratifying to the patient but to the operator as well.

DR. IRWIN: I think the class of cases referred to come under the domain of the surgeon more than that of the physician. We who do not open the abdomen come in contact with peritonitis sometimes, but it is impossible to diagnosticate between suppurative peritonitis and any other form unless there is some his-



tory pointing to the cause. If we find a tumor in the region of the appendix or the presence of appendicitis we may suspect suppuration, but at most we can only suspect it and, therefore, strictly speaking, I believe that suppurative peritonitis belongs to the surgeon.

I am interested in the method of treatment suggested by Murphy and spoken of by the essayist. When the saline solution is injected into the rectum it penetrates the membrane of the rectum and comes in contact with the substances within the peritoneal cavity, and they are washed out at the most dependent portion of the pelvis. The absorption of the immense quantities of fluid that have been mentioned is certainly a great revelation.

DR. SATTERWHITE: If great stress is laid upon the drainage, and of course the object of the drainage is to get rid of the fluid, why then is not the abdominal cavity more frequently flushed out and cleansed with the saline solution?

DR. WILLMOTH (*closing*): In reply to Dr. Satterwhite's question that he has just now asked, the reason why Murphy has advised against this is that the mopping and irrigating and handling the intestines tears the lymph off of the visceral layer of the peritoneum in the region of the diaphragm where absorption takes place so readily. In washing out the abdominal cavity and mopping off the intestines you open up all the avenues for absorption, and the poison passes into the blood vessels and you have a septicæmic condition to deal with as Dr. Wathen has spoken of and the mortality from that is very high. The idea is to do as little as possible. If it is a case of appendicitis he opens over the appendix, and if the appendix is found easily it is removed; if not it is left alone. He then places a cigarette drain through the appendicular incision. That is all the handling that he does. He advises against irrigation and handling of the viscera because it destroys this coating of the peritoneum and allows absorption to take place.

As to the question of early operation referred to by Dr. Wathen, of course that is one of the main points, and Murphy dwells upon the point of being able to determine at an early stage when dealing with acute peritonitis, and he bases his diagnosis upon the pain, nausea and vomiting, dullness on percussion, tenderness over the abdomen and hyperleucocytosis. These are the symptoms he relies on and with these symptoms he opens up the abdomen.

As to the many kinds of infection Dr. Wathen spoke of as

being found in the abdomen, it is true that we have many varieties of infection to deal with here. The first mentioned by me is the most common variety. As Dr. Wathen says the streptococcus is one of the rarest forms that we have to deal with. The colon bacillus is most commonly found to be the cause.

Now, as to the adhesions referred to by Dr. Wathen, we recognize that in long standing cases where there are many adhesions that they would not be relieved by this treatment. The line of treatment we spoke of to-night is only intended to be applied in acute cases. The longer they stand the less chance they have for recovery.

I have had some experience with the antistreptococcic serum infections and have been led to believe that it is beneficial. Of course I used many other things and it is difficult to tell what particular thing did good. It has been my pleasure to use it in two cases of puerperal septicæmia. They were undoubtedly of streptococcic origin as far as I was able to tell from microscopic examination. Some of the milder infections, one particularly, were demonstrated. I thought I got a good effect from the antistreptococcic serum. Murphy lays a good deal of stress on this and it is in the streptococcic infection that he advises the use of the serum.

As to the relief of the patient's thirst that Dr. Satterwhite asked about, I will say that the use of the saline solution in the rectum will allay the thirst, and patients have very little thirst when using this line of treatment. In my experience there has been the most complete relief from this intense thirst. This little girl did not care for any water and did not drink any water for thirty-six hours; she would not take it, she had no desire for it. In this case the irrigation was not used as practiced by Dr. Abell and advised by Dr. Murphy, because the little girl was irritable to the use of it and did not like to have it used on her. The symptoms improved in twenty-four hours and it was not used after that. In twenty-four hours she took up about four gallons of the saline solution. She was a little girl of fourteen or fifteen. This fluid is taken up by the large intestine and is excreted in the region of the diaphragm where absorption takes place most rapidly, and as it passes down over the peritoneum there is a continuous irrigation going on. The patients also pass a large quantity of urine when taking this treatment.

## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, DECEMBER 18, 1906.

#### EXHIBITION OF PATHOLOGIC SPECIMENS.

DR. CHEATHAM: I have a piece of steel that is a little different from the one I exhibited at the last meeting of the Clinical Society. This is a larger piece and it passed through into the posterior portion of the eye.

This man was working with a hammer and punch, and was using both himself. In these cases if one man is using the hammer and the other the punch there is apt to be a suit for damages. This piece of steel I think came from the hammer. Fortunately it struck the blind eye. I examined this man's eyes in June and found the vision 20/100. The eye has been affected all his life. He does not know whether it was injured in childhood or not. The piece of steel struck at the outer angle of the eye and passed through the cornea, iris and lens and lodged in the posterior portion of the eye. The magnet on the outside of the eye had no effect at all. Usually the eye bulges out if there is a piece of steel this size in it and the magnet is placed near the eye. This had no effect at all. As soon as the point of the magnet entered the wound you could feel the piece of steel strike it. You could not only feel it strike the magnet but could hear it. It withdrew the metal without trouble.

I do not know what the result will be. The eye was injured Thursday or Friday last and he comes to the office to see me tomorrow. I have been going to his home to see him. I do not know what vision he has as the piece of steel passed through his lens. I do not believe that this piece of steel could have been removed under any other circumstances at all. It was removed through the original wound. It would have been impossible without the use of the magnet to say whether there was a piece of steel in the eye or not. It was impossible to get a back view of the eye with the ophthalmoscope.

DR. SATTERWHITE: Would it not be much better, Dr. Cheatham, to use a strong magnet because it would not do to leave that piece of steel in there because it would set up trouble and the eye will eventually have to be enucleated?

DR. CHEATHAM: If the piece of steel is very tightly in the

tissues it is impossible to remove with a small magnet. A great many of these pieces of steel can be located with the ophthalmoscope and can be removed by making a wound close to the metal.

DR. J. R. WATHEN : I would like to say something in regard to the Haab magnet. I have just returned from Philadelphia, and last Sunday I went through Wills' Eye Hospital, and since January nearly twenty thousand eye cases have been treated there. This is one of the few eye hospitals that limit their work to the eye. I had the pleasure of seeing the Haab magnet there. This one is now in disuse because it almost enucleates the eye when a foreign body is removed. The magnet now used is a Sweat magnet and a much smaller one. They extract foreign bodies with a great deal of accuracy. They limit the extraction to all of those bodies outside the sclero-corneal junction and near the surface. If they are located anywhere else they do not attempt to remove them. The use of the Haab magnet is discarded and the smaller magnet is used.

DR. CHEATHAM : I use this magnet with a reostat. It has a foot piece that I can work and make it strong or weak. I can make it as weak as the Sweat or as strong as the Haab.

DR. MARSHALL : I would like to ask Dr. Watlen the reason for not attempting to remove bodies unless they are close to the surface?

DR. WATHEN : They have immense clinical material. They draw an immense clinic from Philadelphia and the surrounding country and right across from them is the——Electrical Works and they have an immense number of foreign bodies to remove. Outside of Haab's clinic they have reported more cases than anybody in the world. They have paid special attention to the removal of foreign bodies from the eye; one or two cases are reported where the piece of steel was located and in using the magnet the whole front of the eye was drawn out. Dr. Sweets is connected with that work.

Dr. Sam Brown Hays, one of the internes in that hospital, wished to be remembered to the Society.

DR. J. R. WATHEN : I have two specimens here. One was presented about three years ago. This prostate was removed by the perineal method from a man of 74. I present the second specimen as being unique in this respect—it having been removed from a son of the same man. This man is fifty-seven years of age. The old gentleman is living still and is in excellent health. The man from whom the second specimen was removed is still living, and

has been discharged from the hospital well. One was removed by the perineal method, the other by the suprapubic. The reason I used a different method in the last operation was because this was a prostate rising high up in the bladder, and I felt that it was advantageous to remove it in that way.

Both of these cases had complete retention necessitating the use of the catheter every twenty minutes and the use of opiates to relieve the pain. Both are in good shape to-day.

I do not know of a single instance of this character reported where there were two in one family.

DR. MARSHALL: I have a case to report that is of interest in some respects. The patient was a little child in one of the institutions where I am on duty at the present time. My attention was called to the child one day by the nurse who thought it just had an acute indigestion, probably from overeating, and I did not take the child's temperature or examine it. Taking the nurse's diagnosis I ordered a dose of calomel to be followed by oil the next morning. I saw the child late in the afternoon. The next day, when at the institution, they called my attention to the child. As soon as I reached the bedside I recognized a more serious condition than acute indigestion, and upon examining the child I found that it had pneumonia.

The child went on and the pulse became very rapid and ugly in character and it looked like the child was not going to live, and the third day after I had recognized the pneumonia I told a member of the institution that they had better communicate with the people of the child as it was in a serious condition. When I made my visit the next morning, early in the day, I found the nurse at the door saying that the child was very well and that the child was asking for something to eat, and when I took the temperature—it had dropped down in the early morning to subnormal—it was normal, the pulse was down and the crisis had passed. At first I thought the crisis was earlier than the first day, but upon investigating the case I judge that it was twenty-four hours old or more when I first recognized the pneumonia.

DR. WEIDNER: The main point the doctor has drawn attention to, that is the *character of the onset* frequently occurring in children. Instead of having the more usual onset with a chill we may have vomiting, and in others, convulsions. I have several times seen the same thing occur in children, and it is misleading and requires the closest attention to the other symptoms and close examination to make an early diagnosis. In this respect



it is similar to the pain which may be misleading. The pain may be located on the opposite side. I remember several cases where the pain was referred to the abdomen simulating abdominal disease. In that case the child had pneumonia of the upper lobe. I had another instance where a child had croupous pneumonia of the same lobe three times in three succeeding years, each time terminating by crisis and good recovery. It was four or five years old when it first had pneumonia.

The other point that is interesting is the *early crisis*. In the absence of previous symptoms I suppose the attack may be dated from the vomiting and the pain and the fever. There is no reason why pneumonia might not terminate as early as the third or fourth days. The course undoubtedly depends upon the two factors; the virulence and quantity of the infecting germ and the natural resistance of the individual.

DR. IRWIN: This is an interesting condition of things. I have never seen a case like it, nor have I seen one to correspond to what Dr. Weidner says. I have seen early crisis in children under ten years of age and I have seen it in the adult, but I have always believed that I was mistaken in the diagnosis when early crisis occurred. I think I had more to do with œdema than pneumonia in those cases, especially in adults. I have seen cases of catarrhal pneumonia leave one lobe and go to the other; a crisis would occur, but in a day or two all the symptoms would return. But in lobar pneumonia, as the doctor described it, the crisis is interesting to me in view of the fact that I have never seen one like it.

DR. LEAVELL: I think Dr. Marshall's case is interesting from the point of rapidity of recovery in one instance, and in the second place from the fact that the pain was referred to the abdominal cavity. I believe in children we have cases of pneumonia simulating indigestion frequently. This is rare in adults. That has been my experience. I have seen quite a good deal of pneumonia in children, more particularly the acute catarrhal pneumonia. We know that lobar pneumonia is not so frequent in children as we find in the adult. We expect the crisis to occur more rapidly; certainly within five days. That is not true of lobar pneumonia in the adult. We expect it to occur in from three to nine days. The suddenness of the onset is more characteristic in children than in adults. I believe that we have a higher temperature and more prostration in children, and like Dr. Weidner, find that nearly all of these cases in children begin with vomiting, and if not that we have convulsions.

I did not hear Dr. Marshall state how high the temperature went. This is a matter of some concern. I believe that the temperature rises higher in children, the onset is more sudden.

Like Dr. Irwin I hardly think you can make an accurate diagnosis. In children we hear the subcrepitant rale, and in two days the lung has cleared up and the child is able to sit up and go about his business. I do not believe that is an unusual condition to find in children.

DR. MARSHALL (*closing*): There is one other little feature that I might have mentioned about this child that I discovered on the day of the crisis. I learned that the child had been allowed to use liquor before it came to the institution, and it would not take much of any nourishment except liquor, and I promptly cut the liquor out. For the few days that I needed stimulants I used other things.

In reference to Dr. Weidner's remarks I would be suspicious of a child that had repeated attacks of pneumonia in the upper lobe of the lung, and I would be very suspicious that there was a tubercular trouble there, and I would watch it and build it up from the moment it had the second attack. I would warn the mother that any running down would probably be very detrimental to the child.

DR. WEIDNER: I would say that these were typical attacks of croupous pneumonia and each terminated by crisis.

DR. IRWIN: I noticed a report in a medical journal recently of a child of three years who habitually smoked a pipe. He had been smoking since he was eighteen months of age.

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## CORRESPONDENCE.

KWANG JU KAREA, ASIA, August 10, 1906.

*To The Louisville Practitioner and News:*

The effect of phosphorus upon the jaw bones is too well known for the contribution of additional intelligence relative to this sort of poison. However, three cases recently presented at my clinic, two of which the manner of injection was so unique that they merit comment.

CASE I.—Pak Hying Syu, a Korean gentleman, had been in the habit of picking his teeth with matches. He came to my clinic complaining of toothache and a bad odor of the mouth. Examination disclosed neurotic gum about the lower right canine, tendency of gum to bleed upon slight provocation, and a very of-

fensive odor. (The odor of phosphorus necrosis is so characteristic that an error in the diagnosis of the second case is culpable). Particles of food had lodged between this and its neighboring tooth, and in an attempt to remove them to allow a more perfect examination, a few fibers of dental floss became imprisoned between the two teeth. He attempted to remove these by using a match. This act directed my attention, and questioning elicited the fact this was a favorite instrument in picking the teeth. He also gave a history of a defective canine which allowed entrance to the poison.

CASE II.—A two year old child was allowed to play with matches which resulted in the development of necrosis of the inferior masilla. Three months after the poison was admitted, the child presented for treatment. I found the entire lower jaw bone necrosed with extensive involvement of the soft part. By means of a dental forceps I made a fracture of the mental process, and then lifted out both rami without difficulty.

CASE III.—A native mother carried a box of matches in a pocket in the waist just above the right breast; she was drenched in a rain; the matches were melted and her breast was bathed with the water which flowed over the matches. The two year old baby was allowed to nurse and necrosis of the lower jaw resulted.

The first case was operated upon and recovered immediately. This case constitutes sufficient reason for denouncing the pernicious use of the match as a toothpick, a practice which is prevalent in the United States. I am confident such cases have been treated by the general practitioner without recognizing the cause. In curetting the bone in these cases I make it a practice to remove not only the necrosed bone, but well into healthy tissue, and then use a prolonged irrigation of a strong hot permanganate solution. My experience with this trouble has been of sufficient magnitude to confirm my confidence in the efficacy of this solution as an adjunct to radical treatment. In two cases I operated without using it with a result of recurrence. The object of this paper is to call attention to the match, as used as a toothpick, as a factor in the production of phosphorus necrosis and to condemn its use, emphasize the efficacy of hot permanganate as an auxiliary measure to operation, and to show the time necessary be complete destruction of the inferior masilla from ten weeks to three months.

Respectfully Submitted,

J. W. NOLAN, M. D.

*Medical Missionary.*

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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F. W. SAMUEL, A. M., M. D.,	{ EDITORS.	O. P. NUCKOLS, M. D., Ph. G.
SAMUEL B. HAYS, M. D.,		MANAGING EDITOR.

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## Editorial.

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*The Abuse of the Microscope in the Diagnosis of Pulmonary Tuberculosis.*

There is no doubt but the microscope has its place as a diagnostic method, but is it not abused? How

often is a patient told his lungs are all right because the microscope shows no tubercle bacilli. Just some streptococci and staphylococci. At the end of two months another sputa-analysis is made and again pyogenic cocci are demonstrated, but no tubercle bacilli; even after a period of several months no tubercle bacilli, but the pyogenic cocci are still present, and we attribute all of the irritation to these.

Recognizing the fact that the health epithelial cell, wherever found, are endowed with a repellant chemotoxis, it is impossible for micro-organisms to increase in number and virulency while in contact with these cells; so bacteria aspirated into the alveolar space of the lungs fail to find suitable environments for their growth and rapidly disappear from the sputa. Now, if there is a tubercular infection that has been made possible by some condition or circumstances so lowering cell activity that a "*locus minoris resistanciæ* exists," an atrium has made

bacterial invasion possible. Now, with a so-called sub-acute tubercular inflammation, with the accompanying edema and coagulated exudate, a perfect culture media results; the pyogenic cocci, finding every condition suitable for growth, increase with such rapidity that they soon attack and invade tissue made weak as a result of saturation with tubercular toxines.

Wherever there is an inflammatory condition present, the exudate poured out in the tissue, protect in two ways: *First*, by stopping up lymphatic mouths with thrombi and, *second*, by fibrin, agglutinating and sealing tissue and squeezing together cells, the escape of bacteria and absorption of poison is prevented. Now, all this time the patient has an incipient tuberculosis. There is local consolidation, an infiltration of round cells and fibroblast, the bacteria are slowly increasing in number. White blood cells drag off bacilli, but are soon poisoned and die, leaving the germ in a new area of tissue, where another infection results. The pyogenic cocci, getting in at this stage, rapidly break down this already weakened tissue. We can easily see that, until the pyogenic cocci liquefy this coagulated exudate around a tuberculous mass, that it is impossible for tubercle bacilli to appear in the sputa. So small-cavity formation must precede the appearance of tubercle bacilli in the sputa. Then why wait and depend on the microscope when by physical signs we know that a lesion exists? Many of us wait to see the tubercle bacilli before beginning radical treatment when we should recognize primary involvement long before cavity formation begins.

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#### NOTES AND PERSONALS.

#### PENNSYLVANIA RAISES THE REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOL.

Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennsylvania has decided recently to raise the requirements for admission to its medical



school. These requirements include two years of general college training and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.

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### ANNOUNCEMENT.

*The Journal of Inebriety*, after thirty years of continuous studies of the diseases of inebriety and drug taking, begins its new decade by entering upon comparatively new field of physiological and psychological therapeutics, for the treatment of these neurosis. Arrangements have been completed by which *The Archives of Physiological Therapy* has been consolidated and will hereafter be published as a part of *The Journal of Inebriety*. This very able monthly has been developing parallel lines of study with *The Journal of Inebriety*. In the opinion of its managers its scientific value would be greatly enlarged by concentrating its work along some special lines. The disease of inebriety and its allied neurosis is a field of most practical interest, hence *The Journal of Inebriety* is selected as a medium for continuing the work of *The Archives of Physiological Therapy*.

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THE Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley, will close his clinical course with four special lectures: March 27th, practical points in the diagnosis and treatment of diseases of the skin. April 3rd, errors in diagnosis and treatment; doubts in dermatology. April 10th, danger signals from the skin. April 17th, the signal and treatment of itching. And also announce a lecture by Dr. William Seaman Bainbridge. April 24th, some phases of the cancer problem. Illustrated by a series of cases.

WILLIAM C. WITTER,  
*Chairman of Executive Committee.*

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THE Kentucky State Association of Railway Surgeons will hold its second Annual meeting at Frankfort, Kentucky, May 14 and 15. We not only expect you to be present, but if not a member of the Association to send your name and application to Dr. James B. Kinnaird, Secretary, Lancaster, Ky. We are expecting a fine as well as profitable meeting.

## Recent Progress in Medical Science.

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### GENERAL SURGERY.

IN CHARGE OF

A. D. WILLMOTH, M. D.,

*Professor Surgery and Clinical Surgery, Medical  
Department Kentucky University.*

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### GENITO-URINARY AND SKIN.

IN CHARGE OF

HENRY H. KOEHLER, M. D.

LOUISVILLE, KY.

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**Goitre.**—Charles Mayo (*Journal A. M. A.*, for January, 1907). In a most excellent article on this subject the author believes that the disease is not on the increase to a very great extent, as the reading of the literature would lead one to believe, but that more cases are reported for the reason that people are being educated up to the place where they are more willing to be operated on than formerly, and believes that excluding cancer and severe forms of exophthalmic that the surgery compares favorably with any other major surgery.

Mayo goes farther and says that surgery of the thyroid is most satisfactory, gives immediate relief with brief disability, the mortality being less than three per cent. in the simple form.

In summing up the symptoms seen and the pathological conditions found at operation he arrives at the conclusion that the symptoms suffered from are not necessarily due to the retention and development of a tumor but is one of increased secretion, absorption, and delivery by the lymphatics of the glandular secretion that gives the symptoms in exophthalmic varieties. In the treatment of this variety he speaks in favor of belladonna, and the X-ray, believing that the last named remedy has an especial predilection for the lymphatics and glandular system, and not only benefiting the patient by controlling the absorption of the poisonous material, but he thinks that in many instances that its influence changes the character of the growth, and that while it may not be permanent it is valuable in preparing the patient for operation.

In the simple form he believes that many can be cured by persistent treatment with iodine or organotherapy; he condemns

strongly the semi-surgical treatment, viz: punctures and injections, and drainage in the cystic forms.

In the surgical treatment of the exophthalmic variety he says that the removal of the cervical sympathetic is only one-half as favorable as the operation that attacks the diseased organ itself; also that the division of the isthmus only gives relief in the malignant form, for in the others the pressure is on the sides of the trachea and not on the center. In 300 cases he has only had eleven deaths, 110 of these were exophthalmic with nine deaths, with but two in the last sixty-four cases. He prefers the patient in reverse trendelenburg with roll under neck unless this interferes with breathing, also makes collar incision, and when dealing with the gland where there is a large cut surface exposed he burns this over with carbolic acid, followed by alcohol, or often Harrington's No. 9 solution applied over the cut tissue to close the lymph absorbents and favor drainage. Large incisions and large cavities are drained temporarily, and exophthalmic cases are drained as freely as the most septic wound.

#### DERMATOLOGY, VENEREAL AND GENITO-URINARY DISEASES.

DERMATOLOGY.—In this field there is nothing new to report. By far the greater part of its current literature is Dead Sea fruit to any one except the pathological or laboratory worker. It must be confessed that the routine pictures of sections of tissues conveying one particular idea, and the high sounding descriptions of pathological obscurities cluster up the articles of recent writers to an uncomfortable degree. Practically very little is gained by this—the search for and discovery of say a thoroughly safe and efficient anti-peuritic would mean more than tons of such writings.

However there are many earnest therapeutic strivers spurred on by the commercial value of possible discoveries, and we thus find the large chemical firms putting forth product after product. Thus far they have done little more than to congest uncomfortably our medical armamentarium. The mainstays in the therapeutics of skin affections still remain the few old and tried standbys. The trick to learn is to properly judge the time and manner of their application.

LEPROSY.—Within the past year the subject of leprosy has obtruded itself on the notice of some of our sociological authorities. Cases of leprosy are multiplying in the United States.

As yet there seems to be no focus of infection in this country, that is to say all our cases are imported cases, and those who develop the disease in this country contracted it elsewhere; owing however to the tremendous immigration of a low grade and undesirable class of aliens we are shouldering ourselves with a burden not to be scoffed at. The Baltic provinces of Russia having been sending us numerous cases, (leprosy there seems to be on the increase), and we as receive thousands of immigrants from this source, great watchfulness will be necessary.

Granting its utter lack of direct contagiousness, it is yet a grave thing for a community to be confronted with the care of one or several lepers, for the reason that there are no places to accommodate them, and also on account of the fear and sensation such cases excite among the people.

ACNE.—This affection, trivial in itself, but exasperatingly annoying to the possessor, has been the subject of investigation by several workers. Kromayer has invented a cutaneous punch such as has before been used for making biopsies. The operation is painful and bloody and will very likely be soon forgotten.

Moshknowitz has treated acne by applying Biers principle of hyperæmia, the affected area being dry-cupped with gentle suction. Theoretically this method ought to achieve results, but the long time consumed—one-half hour twice daily—is in its disfavor. After all, the time-honored applications of sulphur lotions, such as the "Lotio Alba Co." followed by mild curetting of epidermic expoliation, remain the best procedures. For excessive pustulation the application of an ammoniated mercury ointment is decidedly beneficial, and for deep suppurated lesions incisions are indicated followed by the nightly application of the Beiersdorf mercurial plaster.

All authorities agree that the main underlying cause of acne is after all the perverted function of the gastro-intestinal tract which must needs be corrected if results are to be achieved.

ERYSIPELAS.—Rona, an Italian authority, has recently put forth his views regarding the therapy of erysipelas, his material aggregating to almost 5,000 cases. Deductions from such a vast amount must necessarily be authoritative. His conclusions are not encouraging. No drug or application seems to influence the course of the disease to any extent and the disease becomes purely symptomatic. Compresses of alcohol relieve certain symptoms but are not curative. Injection of diphtheritic antitoxine, as recommended by the Russians, were found to be value-

less; neither did Aronson's serum and normal horse serum have any good effect. Anti-streptococcic serum may logically be expected to give results and probably does in some cases. Locally the best remedy remains ichthyol.

OINTMENT BASIS.—It has again been pointed out that the routine prescribing of vaseline as an ointment base is reprehensible. Vaseline, though chemically inert, does exert a decided irritant action on certain inflamed conditions of the skin, particularly cases of infantile eczema. In the treatment of such cases the base should be benzoated or pure lard, fresh not rancid, mixed with lanolin if need. Mixture of olive oil and cocoa butter form very elegant and satisfactory vehicles. Irritant applications designed to set up a decided reaction are contrarywise best made up with vaseline.

SYPHILIS.—Pernet, in a recent publication, discusses the differential diagnosis of syphilitic and non-syphilitic lesions of the skin. This is a subject of which the general practitioner must have a good practical knowledge. The importance of recognizing obscure syphilodermata is too great and failure is fraught with too grave consequences to allow the complacent attitude of indifference that is so often assumed towards other cutaneous diseases. Pernet emphasizes three anatomical facts characteristic of other syphiloderm, early or late.

First.—They are all cellular infiltrations of the corrosive differing only in size.

Second.—These cells do not become organized into connective tissue, but undergo involution by retrograde metamorphosis.

Third.—The infiltrate always spreads and recedes centrifugally.

The polymorphism of syphilis of the skin prevents us from framing up a differential scheme as to color, localization and resistance—we are compelled to take in the whole picture, a general impression, as no one single feature of a syphiloderm is ever characteristic of its true nature. The chronology of their appearance is important. The older the lesions are, the larger they are, the fewer in number and the longer the intervals between their appearance. Standing in the full glare of the microscopical limelight we still find the *sperochæta pallida* as the long sought for cause of syphilis. No reasonable doubt remains of its authenticity, and consequently a brief description of this small but portentous individual may not be out of place.

It should be borne in mind that this organism is not a bac-



teriaism, not a microbe, but belongs to the animal kingdom of the flagellata groups. It has no relation to the vegetable spirilla, owing to its extreme tenacity and difficulty of staining, it is easy to comprehend why it had so long baffled the searching eyes of hundreds of investigators. In appearance it is a fine thread twisted like a corkscrew with numerous abrupt turns, up to twelve and fifteen at times. It is highly motile and incapable like all pathogeny animal micro-parasites of artificial culturation. While we are not thus enabled to establish its relation to syphilis by the laws of Koch, we are yet forced to the conclusion of its being the causative factor as we are in the cases of the Hansen bacillus in leprosy and the plasmodium malarial. In smear preparations the best stain remains the Gelinsa stain; but in sections the nitrate of silver method gives far better results, and by its use the spirochæta has been abundantly demonstrated in late lesions, where formerly it was missed. In the syphilis transmitted to apes by inoculation with human material, Metchnikoff and Roax have found the organism identical in every particular with the original.

GENITO-URINARY.—It is a well-known fact that the testicle after an obliterating epididymitis undergoes no apparent structural changes. It remains the same to sight and touch as before although its secretion is forever barred and exit atrophy does not set in.

Posner has investigated this subject and has found that the testicle preserves its spermatogenic function for many years. The experiments were made by withdrawing fluid from the gland with a hypodermic needle.

Out of twelve cases where the epididymitis dated back seven to twelve years spermatazra were formed in ten. In five others with occlusion twelve to twenty-six years old, spermatazoa were found in one case of seventeen years duration.

*Irrigation of Seminal Vesicles.*—In the proceedings of the American Association of Genito-Urinary Surgeons, Belfield advances the claims to the value of irrigating and draining the seminal duct and vesicle through the opened vas. The vas deferens is brought up close to the skin of the scrotum and held there by a curved needle. Under local anæsthesia the skin and tissues of the cord are incised until the vas is exposed which is opened by either a transverse or longitudinal incision. Into the opening a blunted hypodermic needle is introduced, and any desired solution injected distending the ampulla and vesicle. The

cut vas may be stitched to the scrotum and a permanent fistula maintained. This procedure is supposed to benefit it in gonorrheal vesiculitis, ordinary purulent infection of the vesicles in elderly people and in relapsing epididymitis. It is claimed that after healing the lumen of the vas is not occluded.

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## BOOK REVIEWS.

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MERCER'S COMPANY LECTURES ON RECENT ADVANCES IN THE PHYSIOLOGY OF DIGESTION.—Delivered in the Michaelmas Term, 1905, in the Physiological Department of University College, London. By Ernest H. Starling, M. D., F. R. S., Jodrell Professor of Physiology. With twelve illustrations. Chicago: W. T. Keener & Co. 1905.

This little book is a collection of a course of ten lectures dealing with original work done in physiology at University College, London. Two phases of digestion are stressed: chemical and physical conditions which determine digestive changes in food stuffs, and the physiology of the pancreas. The course of lectures is based on laboratory work, and consequently, to be appreciated, requires fair knowledge of organic chemistry, as well as the general principles of this phase of the more general subject. It is an excellent contribution to the latest trend of thought and direction of research in one of the fields which offers most to the wide-awake physician.

B. L. J.

ESSENTIALS OF HUMAN PHYSIOLOGY.—By D. Noel Paton, M. D., B. Sc., F. R. C. P., Ed. Superintendent of the Research Laboratory of the Royal College of Physicians of Edinburgh; Lecturer on Physiology, School of Medicine of the Royal Colleges; Examiner in Physiology in the University of Glasgow and for the Royal College of Physicians, Edinburgh; and late Examiner in the University of Edinburgh. Second edition. Revised and enlarged. W. T. Keener & Co., Chicago. William Green & Sons, Edinburgh and London. 1905.

The treatment of this book is in harmony with its title. It is not a manual, neither is it an exhaustive treatise. It is adapted to the needs of the student who wants the practical part of the subject and to the practicing physician who feels the need of a good, quick reference work or of a review of the essentials of physiology. Anatomy, histology, and experimental physiology are eliminated as far as consistent with an intelligent grasp of correct principles. The gist of most recent advances in the subject is given. The omission of pages of discussion is in evidence. Respiratory circulation, digestion, and the physiology of the nervous system receive most attention, as they properly should. In a word, it is thoroughly practical and sufficient.

B. L. J.

A TEXT-BOOK OF HISTOLOGY.—By Frederick R. Bailey, A. M., M. D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons, Medical Department, Columbia University, New York City. Second and revised edition. Profusely illustrated. New York: William Wood & Co. MDCCCXVI.

This second edition of Dr. Bailey's most excellent work is an improvement over the first edition in almost every way. While in the preface he says there has been no change in the general plan or scope of the work, yet the work as a whole shows the results of revision. Cuts and diagrams are better; two years' advance in neuro-histology is fully recognized; and the publishers have improved their part of the work in the way of a more substantial and attractive volume. At the end of each chapter following an important subject are found directions for laboratory technique. The text itself is not verbose and is readable; added to this, large, clear type and copious illustration make, with the other features of the text, a work that deserves much use.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III. The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert Andrews, M. D.; Gustavus P. Head, M. D. Series 1906. Chicago: The Year Book, Publishers, 40 Dearborn Street.

This is the third volume of the 1906 Series and is divided into three heads. The first is on "The Eye," by Casey A. Wood; the second by Albert H. Andrews, on "The Ear," and the third on "The Nose and Throat," by Gustavus P. Head, the general editor of the whole series. The most distinctive feature of the work is that these subjects, which are usually written so as to appeal principally to the specialist, are here handled in a manner that may be read and used with profit by the general practitioner. Among the practical and interesting subjects treated under the subject of the eye are the following: Color sense and color blindness; removal of lens in myopia, of which 2,500 operations are reported from abroad, with but fifty in America. The most interesting feature of this subject has been tabulated by Huber. One hundred and fifty-six operations were reported in his own clinic. Results enumerated are highly suggestive. "The Hygiene of the Eye" is another timely topic, which should, with the "Bacteriology" of that organ, receive more attention from the general practitioner. The subject of "Ocular Surgery" is well illustrated, enumerates and describes the most recent instruments and technique connected with the

same. This subject, with "Ocular Therapeutics," brings the treatment of the ordinary eye cases within the range of the average doctor. The two remaining departments are as practically executed and brings within small compass the most necessary recent knowledge of these branches of medicine. B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago; and C. von Bachelles, M. S., M. D., Gynecologist to the German Hospital, Chicago. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

This little book is not intended to take the place of complete text-book or of even a manual on the subject, but is simply a summary of the advances in gynecology with the year past. Under "General Principles" some interesting topics are touched upon, such as "Temperature During Menstruation," "Pelvic Diseases and Insanity," "New Instruments" (among them Foges' colposcope), and advances in technique in general operations. Part III., the most extensive of the volume, is comparatively exhaustive, considering the purpose of the whole book, in the treatment of tumors and malformations.

Under "Traumatism," Part IV., Dr. Dudley suggests a new method in the surgical treatment of urinary incontinence. This is one of the stubborn conditions which the gynecologist and the general practitioner frequently meet. The article is thoroughly suggestive. This volume fills a needed place in the year's contributions.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VII. Pediatrics. Edited by Isaac A. Abt, M. D., Assistant Professor of Medicine (Pediatrics Department), Rush Medical College. Orthopedic Surgery. Edited by John Ridlon, A. M., M. D., Professor of Orthopedic Surgery, Northwestern University Medical School, with the collaboration of Gilbert L. Bailey, M. D., Instructor in Orthopedic Surgery, College of Physicians and Surgeons. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

The greater part of this volume is devoted to pediatrics, and differs from the ordinary manual in that it treats on the topics of interest in connection with the subject as found in the various articles of the year. In many instances large portions of these articles are given verbatim. They are taken from a wide field and thus give in accessible form the practical results and advances of the year. Orthopedic surgery is treated in a similar manner, but is not so fully reviewed.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IX. Anatomy, Physiology, Pathology, Dictionary. Edited by W. A. Evans, M.S., M.D.; Adolph Gehrmann, M.D.; William Healy, A.B., M.D. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

What is really new knowledge anatomically can be summed up in a word. Subjects touched on in this volume include Circle of Willis, Anatomy of Inguinal Region, Surgical Anatomy of Prostate, and Anatomy of the Duodenum. Physiology is equally deficient in any new matter. Morgan's discussion of extent and limits of power of regeneration is of some interest. The digestive system is discussed in its relation to medicine and surgery.

Under Pathology some space is devoted to the findings in urinalysis. Both Pathology and Bacteriology contain more new matter than usual, as these subjects are yearly receiving much attention. The cuts and illustrations are the best in the series. The last four pages of the volume are in the form of a dictionary of new medical words.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume V. Obstetrics. Edited by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics Northwestern Medical School, with the collaboration of D. Roehler, M.D., and Herbert M. Stowe, M.D. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

This volume treats the most interesting developments of obstetrics for the year under four heads, namely: Pregnancy, Labor, Puerperium, and the New Born. We say *developments*, for, as the editor, Dr. DeLee, remarks: "The past year has shown little advance in the scientific fields of obstetric research. The attempt has been made to discuss practical subjects more than those purely scientific." This states fairly the position of the volume. Zeveifel's discovery of lactic aciduria and its treatment deserves a reading and some consideration. He considers it a sign of sufficient importance to induce labor at the first indication of eclampsia.

Pubiotomy, or extra median symphysiotomy, received little attention prior to 1906, but the interest is decidedly on the increase, and a goodly number of cases are reported and discussed, including different techniques and instruments employed. According to this work, puerperal infections are being handled more and more with surgical treatment. "Operative obstetrics" seems to be the trend of advance.

B. L. J.



THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VIII. *Materia Medica and Therapeutics, Preventive Medicine, Climatology, Forensic Medicine.* Edited by George F. Butler, Ph. G., M. D.; Henry B. Favill, A. B., M. D.; Norman Bridge, A. M., M. D.; Daniel R. Brower, A. M., M. D., LL. D.; Harold N. Moyer, M. D. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

The various preparations, both new and old, are considered alphabetically, making a useful compilation of the year's contribution. The drugs receiving special attention are the following: Adrenalin, which is accompanied with a double-page table summarizing all its established actions; calx sulphurata, of which much is said as to its power in neutralizing bacterial toxins and stimulating phagocytosis.

Therapeutics considers hydrotherapy (very fully), hyperemia, light, massotherapy, organotherapy, psychotherapy, serotherapy (exhaustively for a manual), thermotherapy, electrotherapy, high frequency, and radiotherapy, on which much is said and very timely said.

Preventive medicine makes an interesting study at all times, and it is not saying too much for the present volume that, in proportion to the space allotted to the subject, it is one of the most interesting collations in the whole series. Cerebro-spinal meningitis and yellow fever are ably presented. Bacteria in railway coaches; hygiene in public schools; influence of alcohol on the life of the race; and the regulation of prostitution, are suggestive merely as titles. Climatology and forensic medicine are also briefly presented.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VI. *General Medicine.* Edited by Frank Billings, M. S., M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, M. D., Professor of Medicine, Chicago Clinical School. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

This volume of the Year Book is edited by Dr. Frank Billings. This is sufficient to guarantee an ample review of the year's advance in general medicine.

Fevers—typhoid, malarial, yellow, relapsing Malta, diseases of the stomach, and diseases of the intestines make up the main bulk of the work. R. C. Harte's twelve conclusions regarding "perforation" are of interest. Blood examination in diagnosis is insisted upon. From the reviews, the use of typhoid serum seems to be growing in favor. Under Diseases of the Stomach, hyperchlorhydria and hypersecretion are almost exhaustively reviewed. This will be found a very useful summary of the year's work for the general practitioner.

B. L. J.

## SOUTHERN RAILWAY COMPANY.

Mr. A. H. Plant, Comptroller of the Southern Railway Company, announces that: For the purpose of insuring promptness and justice to its patrons in respect to the handling of freights at local stations and the handling of loss, damage, and overcharge freight claims occurring on freights received or shipped by its patrons, Southern Railway Company has inaugurated and placed in service a corps of

## TRAVELING FREIGHT CLAIM AGENTS,

whose duty it will be to travel continuously the respective territories assigned to them, visiting at each station not only the local agent, but the Company's patrons thereat with the following objects in view:

1. To secure the prompt handling and settlement of all fair and honest loss, damage, and overcharge freight claims against the Company.
2. To give assurance of this to the patrons of the Company by prompt, courteous, and efficient attention to their rights.
3. To prevent accumulations of freight claims and over and refused freights at stations and to reconcile as far and as promptly as possible all over freights with shortages.
4. To educate local agents to the highest degree of efficiency in treating with patrons in respect to their transactions with them both in respect to the handling of freights at their stations and the prompt payment or declination of freight claims.

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Dr. W. H. Barnett, of Huffins, Tex., in the *Alkaloidal Clinic* for November, 1904, says: "I am satisfied that echthol, a combination of echinacea and thuja, will prevent the sting of bees from hurting him. Let him take dram doses every hour for three hours before he commences to work with them. The reason for the faith that is in me is this: They used to hurt me. Last summer I was taking it for a skin disease, and while under its influence I was stung by a wasp on the face and neck. When stung I started to the house to get something to stop the pain and swelling that I expected to suffer with, but instead of pain and swelling, as heretofore when stung, there was no more of either than a mosquito or gnat would have caused.

# THE American Practitioner and News.

“NEC TENUI PENNĀ.”

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“Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.” —RUSKIN.

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## Original Communications.

### HEREDITY.\*

BY GEORGE B. JENKINS. M. D.,  
LOUISVILLE, KY.

IN considering this matter, it is not the essayist's intention to give voluminous quotations from the enormous mass of literature which has accumulated upon the subject, but to state a few such generally accepted facts as are appropriate to the development of the theme, and then to arrange the matter into such sub-heads as will enable us to consider that portion which most vitally interests us as physicians. Nor is it within the province of this article to consider the subject of evolution, however interesting such digression may prove, save to mention that selective action in breeding animals, presenting certain characteristics to a marked degree, propagates these characteristics in an increased form in their offspring, as witness speed in race horses, milk and butter producing qualities in cows, and many such familiar examples. It is, of course, understood that these same principles obtain in the human being as well as brutes; it is at present neither desirable nor appropriate to attempt to prove or disprove the statement that the thousands of species of animals are derived from a few primary pairs, but to acknowledge the truth

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\* Read before the Ohio Valley Medical Association.

of the development of certain traits and qualities by selective breeding.

Atavism, too, must be mentioned as a tendency presented by animate beings by which racial characteristics are impressed upon descendants, to prevent their straying too far from the parental line; it acts as a weight to pull the given species toward mediocrity, and thus affixes a limit beyond which selective action may not operate, thus preventing many irregularities and undesirable qualities.

Reversion is a well established fact which expresses the tendency presented by animals or plants to return to rough primary forms when allowed to run wild for several generations—that is, when they are removed from the beneficial influences of cultivation and training.

Throwing back is another of these tendencies to be thought of, and whilst it cannot be denied, is not susceptible of explanation; and, were it not for numerous well authenticated examples, would tax the credulity of the most imaginative to accept the proposition that a male can so impress his characteristics upon a female by which he has begotten young, that this female will at a later date give birth to offspring by a different parent, which offspring will present some of the characteristics of her former cohabitor. As to explaining this feature, we know that a large amount of ejaculatory fluid is deposited in the female genitalia at the time of sexual congress, and in the human being as only one spermatid is necessary to induce conception, the remainder is left for absorption, the motile elements passing out into the tubes and even into the abdominal cavity. So if there be anything in the "gemmule" theory of Darwin, or as was similarly expressed by Democritus some 400 years before Christ, "that all parts of the body contributed to the seed," such an assumption would gain weight here, and if acknowledged would account for this remarkable tendency.

Passing these conditions in review, that their proper place may be recognized with reference to the subject under consideration, we must give due weight to another issue which, whilst entirely outside the channel, demands a

place in this connection, and that is environment; and when we consider it in all its phases it is of scarcely less importance than the others mentioned for the fight for existence under unfavorable surroundings, such as climate, foodstuff, enemies, conditions of soil, etc., as well as the artificial conditions imposed by cultivation and training; and in man, precept, example and association all influences our subject to a considerable degree. As for example, were it not for the restraining influence of unfavorable conditions presented by the necessary struggle for existence, a pair of codfish would, if all their offspring lived and propagated in a normal manner, produce in twenty-five years a mass of codfish as large as the earth. Countless other examples as startling as this could be mentioned.

But to hark back to our theme, heredity from Hærcs, an heir is that biological law by which all animate beings tend to transmit to their offspring all the traits of the species to which they belong, and are thus indispensable to the permanence and perpetuation of this species. These traits may have been, as is claimed, the resultant of accidental variations from the prevailing type, dependent upon some efficient but unknown or obscure cause. Post-natal variations are less liable to be transmitted, since they consist in the augmentation or diminution of old features, and seem to be the result of environment, etc., as explained so well in Darwin's "Origin of Species."

There is a second class of variations which are dependent upon causes within the organism itself, congenital variations which proceed from alterations in the germs themselves (Weisman's two laws). While such variations are inheritable, the tendency is a contrast to the strict view of heredity, which strives at the simple perpetuation of the traits and conditions which characterized the forbears, and their forbears, and so on ad infinitum. This difference between variation on the one hand, and plain heredity on the other, has been the cause of a division among scientists; one class, the Neo-Lamarkians, claim the acquired variations to be inheritable; the other, the Neo-Darwinians denying this.



Another phase of plain heredity demands recognition here and that is the inheritance of sex-characteristics, as witness the antlers of the stag, the mane of the male lion, the spurs and fighting spirit of the cock, the absence of spurs and the quiet brooding tendency of the hen. Many such items enter into the consideration, but must be left out for want of time.

Numerous observers have tried to formulate definite laws which would embrace the whole subject, but none meet the demands of the case fully. Probably the most satisfactory is Darwin's formula, which is as follows:

1. Direct or immediate, under which parents tend to transmit their physical and moral characteristics to their descendants.

2. The law of predominance of direct heredity, under which the characteristics of one of the two progenitors is predominant in the product.

3. The law of heredity in reversion, racial heredity, which is applicable to the tendency to atavism.

4. The law of homochronous heredity, or the reappearance of hereditary characteristics at the same period of life in ascendants and descendants.

But for our needs, we must divide the whole subject into such parts as will enable us to grasp the features most appropriate to medicine, and it falls easily into three great subdivisions. (1) The inheritance of physical characteristics. (2) Mental and moral traits. (3) Disease and abnormal conditions.

Under the first head everyone must acknowledge the truth of a law which is so apparent that he who runs may read, a law which is manifested in all forms of animate beings, both animal and vegetable, without which indeed there would be no organized genera or species, but a confused medley which would speedily result in the complete disorganization of things mundane. Argument against this law would be absurd, for "figs do not come from thistles" nor are mice born of elephants. One can understand how the physical conditions are so accurately reproduced in unicellular organisms, when we remember that

by division the parent cell simply splits into two, and we have the same old protoplasm becoming the new organisms, and of course presenting the same form, structure and characteristics of the parent.

Hæckel has shown the analogy in sexual reproduction, it being purely a mechanical process, and directly dependent upon the continuity of the produced and producing organisms, as the spermatid and ovum are part and parcel of the parents; though individual peculiarities are more readily transmitted by non-sexual propagation.

Under the second head the progress of civilization, the upward march of the human race, the wonderful advances in all lines of human endeavor, and the wholesome growth of morality, honesty, religion and all qualities which go to make up an upright and law abiding people, offer abundant testimony to the inheritance and evolution of such traits.

It is just as easy to cite some of the countless examples common to the experience of each of us, of the effect upon the individual of a cultivated and educated—even a talented—ancestry, and the reverse of which is equally true. Before dismissing this sub-division it is well to mention that it is in this place that environment exerts a great influence, as these mental and moral states are greatly increased and amplified by cultivation and association, by precept and example. These are similar conditions as stated, greatly augment the mere inheritance, but do not supply its deficiency; for we see daily the natural aptitude presented by certain children of talented parents, and in the brute kingdom, the bird dog must inherit his “nose” or all the training in the world will never make him a good hunter. And in this connection we see too the barrier which nature interposes to keep in touch with the dead level of mediocrity, the extremes, whether those presenting transcendent gifts, constituting geniuses, or the inferior degenerates falling in the lowest order of criminals and perverts, tend to die out early, and are frequently sterile, truly a beneficent provision.

The third class requires sub-division into (1) inherited conditions, and (2) inherited diseases. Before pursuing

either sub-head a reference to generalities is essential. From a review of medical literature one almost comes to the conclusion that all pathological states have at one time or another been classed under one of these divisions, and even a late work on diagnosis of national reputation gives a list of sixty-two. Probably one of the reasons for this is the confusion incident to the loose use, or rather misuse, of such terms as inherited, congenital, etc. To avoid this an attempt should be made to adhere strictly to the term applicable to the given condition. Not all congenital conditions are inherited by any means; in fact the term itself is of such little importance in considering heredity we can cast it out with but the briefest mention.

As to the inheritance of conditions as has been stated, the transmission of tissue types is so well established a fact that it requires no argument to substantiate it. So starting with this fact as a base of procedure it follows that we must concede that a parent or parents who are weakly, or of deficient resistance will not be able to propagate offspring which are strong and robust, but which like the parent will be weak and lacking in vigor. Nor would it be a far cry to accept the proposition that not only would general resistance be reduced, but the special tissue which was weakened or diseased in the parent would present the deficiency in marked degree in the offspring, and would thus be more liable to succumb to the inroads of the various cause of disease in general and more particularly to those which involve tissues of the given type.

We note in our studies in pathogenesis the presence of abnormal conditions in diseases formerly spoken of as idiopathic, for instant, in epilepsy in the causation of which heredity is claimed to play an important part, we find various lesions, the most common being the remains of old lesions of infantile cerebral hemiplegia which shows positively that there is a definite post conceptional lesion causing the trouble, and that heredity can only furnish an instability which predisposes to convulsive seizures, etc.,

which are instituted by some such accident or anomaly as mentioned.

In this connection it requires extreme care to differentiate between true transmitted tissue types and those altered types, the abnormality of which is due to some cause operating after the inception of impregnation. For example, we see certain cases in which there is a deficient development of the normal tissue as in the family ataxias where the cord in one and the cerebellum in another is very much below the normal standard, sometimes being reduced one-third or one-half the normal size. In such as these a teratological defect, dependent upon errors of development, imperfect nutrition, injury and such must not be confused with transmitted types. Again, accentuation of normal physiological conditions, as for example, muscular atrophy where we know that the young animal presents more individual muscle fibres in a given muscle than the adult, so the disease may be but an increase or continuance of the normal loss. Then too there are numbers of tissues which are very poorly developed at birth, e. g., the gray layer of the cerebral cortex does not begin to appear until at or near the end of the first month, and the fibres of the pyramidal tracts are not fully medullated.

A cretin cannot be said to have inherited myxedema just because it was minus a thyroid gland, or had at best an atrophied one. We note the various anomalies resulting from disturbance of the function of this gland, and it is sufficient to call attention to the practically universal presence of physical anomalies which are presented in varying degrees in all our so-called inheritable nervous and mental diseases. So, vicious conditions operating during the period of utero-gestation, or even shortly after birth could take advantage of such as these, and the resulting condition not be inherited in any sense of the word; and whilst we desire to give to heredity all that properly belongs to it, we, at the same time, wish to exclude from this category all which do not belong there. We constantly hear such expressions as a disease being modified in transmission. The very fact that it is modified is a

sufficient argument against that disease being hereditary. The same can be said of hereditary equivalent. It shows an inheritable instability or weakness, not a disease; this is the kernel of the matter in insanity.

The reason in some so-called inherited diseases, that disease, deterioration or dissolution occurs at the same period in the offspring that it appeared in the parent, is not because it is inherited and can exhibit such a clock-like regularity, but because those cells comprising the given part possessed only sufficient vitality to enable them to bear a given strain for a shorter time than normal tissues would, and consequently give down when the time limit set by the deficient resistance was reached, and these are always prepotent when both parents present a similar weakness, or when the mode of life is such as to increase the strain; and post-ponent when one parent presents a normal vigor, or when the mode of life is such as to conserve the vital energy.

It is but a step farther to see that a subject presenting this reduced state would be more liable to succumb to the invasion of disease-producing bacteria than would one with normal vigor and resistance, and we must sooner or later concede that when the parent was reduced as the result of the action of a given micro-organism, the offspring would be peculiarly susceptible to the attacks of the same germ; so we acknowledge an inherited susceptibility to a disease or diseases. The same principle obtains with reference to immunity, as we find some subjects that strongly resist the invasion of certain bacteria, and who transmit this resistance to their offspring.

As to the diseases of bacterial origin, aside from the modifying influence of inherited susceptibility and immunity mentioned, the question of heredity has no place in the etiology of such. Tuberculosis was long held to be hereditary, but it is now generally conceded to be transmitted through the placental circulation. Syphilis has been the strongest point of all in the argument for the inheritance of disease. One syphilographer says: "Syphilis is a strictly inherited disease, and is inherited from the mother, and



when she is unquestionably exempt from the suspicion of syphilis, and the father is surely syphilitic, the child invariably escapes." Another states that seminal transmission is by far the commonest means of transmission. A third affirms that the liquor amnii of a woman bearing a syphilitic child is capable of infecting a susceptible person. It is acknowledged that syphilis is not transmitted to offspring after the time when it ceases to be communicable through ordinary channels, *i. e.*, after it loses its power of infecting susceptible individuals, as we are all familiar with Colles' law. Looking at this, in a way, remarkable conglomeration, we can surely see that it is a case of the fetus being infected, and neither a spermatid nor an ovum transmission. A brief look at the beginning of things shows us that the instant the spermatid leaves the epididymal cell, or the ovum leaves its formative cell—in other words, when they become respectively a spermatid and an ovum—they, that instant, cease to be a portion of the parent organism, and become possible factors in the production of a new being; and the moment the union is complete between the male and female elements, that moment begins the life history of a new being, which is from its very inception a separate and distinct entity, even being independent of the maternal organism for nourishment for a short time succeeding impregnation. We know that the essential portion of the spermatid measures  $4.5^{\mu}$  long,  $2.5^{\mu}$  broad, and  $1.5^{\mu}$  thick, and in considering that the individual spermatid is the carrier of a disease germ, it would be patent that such an event would result either in the death of the microscopic host, or less likely of the scarcely smaller invader; either conclusion would be an abortion of the idea of the spermatid transmission of disease. And whilst it is somewhat larger than the male element, still a similar argument would be true of the ovum. It is conceded that impregnation most frequently takes place in the outer third of the oviduct, so there is plenty of room for any disease germs which may be present in the ejaculatory fluid to gain entrance to the maternal tissues between the point

of deposit and that of impregnation (and some of the elements go farther before they are finally disposed of), and later to infect the product of conception through the placental circulation, or to cause such local disturbance as to produce abortion, or any of the undesirable results which we know can occur.

So of the abnormal conditions present at birth in the child, we recognize that tissue types are inherited, and diseases and defects are the result of infection of the fetus, or conditions arising during development, either errors of development, *per se*, or other causes which find the immature being a favorable field for operation.

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## INDUSTRIAL INSURANCE.\*

BY A. H. FALCONER, M. D.,  
LOUISVILLE, KY.

INDUSTRIAL Insurance is mostly intended for small wage earners, women and children, who cannot afford to buy larger insurance; for women and children more especially, for, with few exceptions, this is the only kind of life insurance they can buy. Any person, from the ages of one to seventy years, may apply for industrial insurance, regardless of sex, class, nationality or race.

Unlike large insurance, where the examiner so often can have the extreme pleasure of examining in his office and have the applicant call and he can complete his five dollar examination without any inconvenience at all, an industrial applicant will not, and in a large majority of cases, could not, under any circumstances, afford to come to the examiner's office, because he could not at that time, get together, even car fare. These facts being too true, the industrial examiner must hustle all the time. One redeeming feature is that the examiner is under no obligation to the agent; he may be his worst enemy, but you will receive his business just the same, for in all large cities, in fact in all places where industrial insurance is written, the

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\* Read before the Medical and Surgical Society, Feb. 18, 1907.

agent must turn all of his business into the local office where it is carefully gone over to avoid mistakes, etc.; then it is distributed to each examiner by districts.

The examiner is required to call for his work at least once a day, and oftener if necessary, and it will vary from one or two to thirty or more applications, out of which number at least half must be seen at six o'clock, which, of course is impossible, but we must call as near this hour as possible. So often he misses it, maybe two hours, and then the applicant is offended because he did not arrive just on time, and will try to tell him he must call again to-morrow night, or that he has changed his mind, showing that he simply wants to be contrary, and there is the examiner, perhaps three miles from his office, with this kind of a proposition staring him in the face, and realizing that all he wants is the applicant's signature to complete his inspection. Now, what is the industrial examiner to do? Call again the next night, or what? The thing for him to do is this: first of all, keep cool; do not allow your temper to get the best of you or you will kill the business; just explain to the applicant why you are late, for he may think that he was the only call you had for six o'clock; tell him that you simply want him to sign his name, or four or five minutes of his time for an examination, as the case may be, and that he surely would not have you call again for such a small matter. In other words, be so kind and pleasant that you actually make him ashamed of himself, and nine times out of ten you will save yourself another call.

So often when receiving such treatment from people my anger has been so aroused that I would have willingly given the price of my inspection or examination and more, to have expressed my thoughts, but knowing this would kill the business, and, furthermore, that I might have another call in this same house the next day, my motto is: keep cool under all circumstances and you will invariably complete your work.

Under these unfavorable circumstances, an examiner must protect his company as well as himself, for we all

know that often an applicant becomes offended at an examiner and will not have anything to do with a company he examines for; this occurs often with the industrial examiner. Strive to always leave the applicant with a kindly feeling towards your company, the agent and yourself 'Tis an every day occurrence with the industrial examiner to meet all kinds and classes of people. He will be called upon to see people who will do anything to get insurance; tell you any kind of a story and deceive you in any and all kinds of ways, often aided by the agent. So we must never let an opportunity pass unseen or unheard that will aid us at all in protecting our company, as well as ourselves. We must study people's weight, height, complexion, general appearance and the people themselves, for all these matters are of much importance to an industrial inspector. Some of the people who apply for industrial insurance have lapsed their policies and changed to other companies so often that they have learned, from experience, that there are things they must not tell the doctor, as they will be refused insurance. So they will deceive you in every conceivable way about the chronic diseases they may have which, possibly, cannot be discovered from the examination required for this amount, and certainly could not from an inspection. My experience has taught me to suspect every applicant I see, and especially when making an inspection. When I suspect anything from making an inspection, I record it in my remarks, knowing the company will either decline at once, or order an examination, which, if they do, I make every effort to clear up my suspicions. Then if I fail to find what I suspect, I at least have the consolation of knowing that I am in a better position to advise my company in the issuing of that policy. I recall one instance where I asked applicant if there had ever been any consumption in his family, and he very promptly answered, no. From past experience, I knew he was telling me a falsehood, but I proceeded with my examination and when completed to such an extent that he could not turn me down, I asked the question again, but more pointedly this time, and his reply was: "Must I tell you the truth?"

After making it plain to him that if the company caught him in a falsehood his beneficiary might have trouble in collecting his insurance. He then, seeing it in the right light, made a confession which revealed the fact that he had had three brothers and two sisters to die of consumption, and a brother living who had the same at that time. He then informed me that the agent instructed him to answer me as he did, he, the agent, knowing the company would not accept applicant knowing this information. So it is in cases like this and upon innumerable other occasions that the industrial examiner must be very careful, as in this case, this man might have died in a short time of the same disease, and after his death the company learning this family history, things might have been very unpleasant for me.

Again, in this work we see on agent's side of application that the applicant is five feet, seven inches, and weight 175 pounds. The agent has studied his weight and height table and often completes this question by inserting figures which will insure his business being issued. Then comes the examiner, who is positive at first sight that the applicant's weight is at least 225, or more, which the agent knew at the time would make the applicant an undesirable risk. So this is why he takes this chance, hoping the doctor will overlook his false figures, which, if he does, so much more business for him. I say "business," for that is all some agents consider, regardless of risks.

In making our calls, we must not forget that we are often dealing with a class of people who are called upon every day by collectors of various kinds whom they are dodging on all occasions, thereby making an industrial examiner's life one of great hardship by mistaking him under these circumstances, and often necessitating many return calls before he can establish his identity, at last being informed that he was taken for the rent man. This, I should imagine, would be a source of great hardship for an examiner who examines for an industrial company insuring colored people. We should be very quick in making ourselves known before the applicant has a chance to in-



form us that the party we are looking for is not in. I do not believe an industrial examiner should solicit or write insurance, for the company pays him to examine only and remain independent of the agents. So, when he begins to write business, it seems to me to be placing himself on a level with the general agent; then if any trouble should occur (for instance, an investigation of death claim, the company suspecting fraud), of course the agent is going to protect the examiner and vice versa, as they are both one and the same.

There are many temptations in industrial work to make an examiner dishonest, and one of the many is this: You call to see a child under fifteen, the mother informs you the child is not at home; she is in a private school or working in some private family. You ask her all of the questions required for an inspection, have her sign the application for this child, and then you must drive, possibly three or four miles, just to say honestly that you personally saw the applicant. Frequently we see small children at public schools, in the streets, and everywhere the small boy is or may be found. We must never leave the child, under these circumstances, until we have made it very plain to him or her who we are, or we may have cause to regret it when the company's inspector asks the child if the insurance doctor saw him.

Another very great temptation is where the applicant cannot write. We could make a mark that could not be distinguished from applicant's mark made on agent's side.

Again, I recall an instance where an agent remarked: "If I were you, doctor, I would not make this long call just for an inspection; let me secure the signature on your side of the blank and save you that long trip." I, in a pleasant way, informed him that as long as I had been doing industrial work I had never yet turned in one application that I could not honestly vouch for any statement made therein, nor did I at any time fear an inspection of my work, and requested him to write the business as usual, turn the application into the office and I would see the applicant myself. In industrial work, substitution

is occasionally attempted, especially where there is an invalid in the family and a well member of that family impersonates this invalid. If the examiner is not wide awake very soon he will be awakened by a short, but not sweet, letter from the company he is examiner for who has investigated a claim and found that he saw the wrong person.

There are two classes of people I believe all industrial companies are very strict with—intemperate and immoral. The intemperate are very easy to locate; a blind man could determine that question with his sense of smell, but by a large majority of immoral characters a Sherlock Holmes would be baffled if they apply, as most of them do. For instance, the agent instructs the applicant to meet you a certain hour at some friend's house who is recognized as a moral person living in a respectable neighborhood, and there you meet this immoral person under these circumstances and in what it is but reasonable to believe is her own home, and before you are far away she is returning to her real home in the red light district. Now, what are we to do, and to what extent are we to suspect these people? Suspecting a woman of being immoral is a very serious thing, especially when you must record it in black and white. I have known some serious outcomes where the family has demanded explanations. I never suspect a woman of immoral life unless I can prove same. When a lady calls at your office to be examined, "as it would be very inconvenient for her to be seen at home," so you are told by the agent, always be suspicious, and it would be well worth the time for you to at least investigate the number on this application and you will often find the party is not known at the address given, neither was she ever heard of there. Most of the people who buy industrial insurance, however, are the most accommodating people on earth for an examiner to deal with. They invite you at once into their kitchen, dining room, bed room, or into any part of the house; drop whatever they may be doing and give you any reasonable amount of time to examine or inspect them. Often,

in my industrial work, they have gotten out of bed, dressed themselves and invited me in, with a smiling excuse that they were sorry to keep me waiting while they dressed. Can you imagine such a thing among the other class we are called upon to examine? In the first place I would never attempt such a thing. Many examiners who have never done any industrial work imagine it is very simple, and, in a way insignificant, but, with the exception of family history and urinalysis there is very little difference between the two examinations, and I believe from what I have mentioned already, you will agree with me that the industrial examiner must be just as careful and particular as when he is making an examination for three or four thousand dollars. Some industrial companies require an urinalysis; we are at all times expected to examine the heart and lungs, generally, that we may detect any disease that might exist at the time or in the past. One of the difficult tasks is examining a lady's lungs, for a large majority of them are principally abdominal breathers.

Just a word about the social life of an industrial examiner, which, from my experience, is almost a blank, for, after you have made your professional calls, kept your office hours and made all of your industrial calls, completed your blanks and mailed them to the home office, you are ready for the bed. Granting you are not very tired and would like to indulge in some social function, the lateness of the hour would prevent such.

My opinion is that the worst of all an industrial examiner's duties is passing on inspections which we all know little can be seen in comparison to what we may find if a physical examination is made. You may inspect an applicant sitting at a table eating and, from all appearances, in good health and sound in body and discover later that both legs are amputated, or that he is paralyzed from the hips down, which is possible under such circumstances where the agent and applicant both deceive the doctor, the applicant in answering the inspector's questions and the agent by not answering his questions correctly.

Never depend altogether on information that you receive from the agent's side of blank. How often have I seen on his side, in answer to the following question: "Does any physical or mental defect exist?" That his arm or leg was a little stiff and then found that applicant was paralyzed and could not use hands at all and dragging his leg when walking.

Frequently we are told by applicant that he does not want the insurance, does not believe in such, just signed the paper to get the persistent agent out, and various other excuses to turn the examiner down, thereby causing him to lose his small fee and his time consumed in making the call. Should we report this as stated to us, which would prevent the company from issuing the policy, or should we let the business come through? I believe, with few exceptions, we should not stop the business, for we are not in a position to know all the circumstances as the agent knows them. He may have an agreement with applicant's husband, wife, mother, father, son, daughter, or some more distant relative, to carry this insurance which may make good business. Whenever we receive an application we should make every effort to inspect or examine the party; never turn one back to the agent, for a large majority of these stubborn cases make first-class business. But when we are positive the agent has no chance to place the business, we should, I believe, so notify our company. I feel sure that not less than fifty days out of the 365 I receive from one to five absolute blank refusals. I had five in the same house a few days ago that another industrial company's agent was after. I remarked to myself: "I am not going to leave this house until I see every one of these people." So I proceeded to change their minds again and examined all of them before I left, and the agent delivered the policies.

An industrial examiner must do his work systematically in order to save all the time he possibly can, which is of the greatest importance. He must avoid driving over the same territory day and night; if the person he can see during the day is in the same house or neighborhood

where he must call that night, he should hold his day call and see all that night, for, after all of our scheming and display of nerve by pushing ourselves into places where angels might fear to tread during working hours, we often hear ourselves wishing the time was a few hours earlier, knowing it will be impossible to see all of the applicants before they retire, which means another call. Under these circumstances I make my longest calls first, then if any are left over, have them bunched and nearer home.

#### DISCUSSION.

DR. GOSSETT : This is the only paper of the kind that I have ever heard. There are very few papers written on this subject. It is a very interesting subject and a great many physicians do not understand what industrial insurance is. I have known several instances in this city where physicians have said that they would not be an examiner for an industrial insurance company, and at the same time I knew that they were trying to get an appointment to that position. I know of one physician who, in order to get an appointment, offered to take out a five thousand dollar policy with the company if he could get another fellow's place as examiner. An examiner for an industrial insurance company makes from eight to twelve hundred dollars a year. That is cash and that is not a small sum of money to be left out.

The companies usually have an examiner in the eastern district and one in the western district. This allows the examiner to systematize his work and save time. It makes it easier for him. He can arrange his business so that it will not interfere with his general practice.

We meet with some amusing incidents in this industrial business. I remember one case that I examined where I did not like the looks of the old woman. I asked her if she had ever had a cough and she said she had. I asked her how long and she said a year or two. I made an inspection and also a medical examination and found that she had quite a good deal of bronchial trouble; I found a chronic trouble. When I saw the agent I told him that I had examined the old woman and found considerable bronchial trouble, and he replied "I told her to hold her breath while being examined."

I went out to examine a man at Highland Park last Sunday. He wanted a five hundred dollar policy. He said he could not see me at that time as his wife was sick in the front room. I had



noticed before that she was in a family way, and I ask him if his doctor was in there and he said "yes." I told him that I could examine him and did so, thus avoiding a return call.

I had another case where an insection was to be made on short Eighth Street. I went to see John Smith. I saw a little boy in the yard and I asked him if John Smith lived there. He said that John Smith did not live there but Jim Smith did. He said that John Smith was up in the country nearly dead of consumption. I went in and found that the man's name was Jim Smith. He had signed it as John Smith. It was simply a case of substitution. The brother was up in the country very sick. He died a short time after that of consumption.

An industrial company differs from the old line company where it is left entirely to an agent who writes up the policy and takes the applicant to any examiner he wishes to. If you are an examiner and turn down two or three applicants you will find that where you formerly made twenty examinations a month you will make only three or four, because he will take the work to another examiner. In this industrial insurance the city is districted. All the business in your district is yours; the agent does not place the applicant in your hands.

DR. HIBBITT: I have nothing particularly to say except that I enjoyed the essayist's paper very much, especially his reminiscences in regard to his work.

DR. SAM P. MYER: I enjoyed the doctor's paper and I can now understand why he always wears a scowl on his face.

DR. BLACKFORD: I enjoyed the paper very much, and think that only such persons as have had the experience the doctor has are capable of writing a paper on this subject.

I have never made any such examinations, but I have looked over some of the application blanks. Industrial insurance is in a class by itself. It differs from ordinary insurance in many particulars. It differs in that the premiums are paid weekly, and the class of people who take this kind of insurance are entirely different from those who take ordinary insurance. The unfair part seems to be that while they make payments of ten cents a week the premiums are much higher than for ordinary insurance. This seems a hardship on this class of people, yet at the same time I presume that there is no greater blessing that comes to these people than when the company pays them a death claim. Of course it is much more expensive for a company to carry this class of insurance.

I believe that all insurance companies doing business issue policies of a certain kind to children without any examination at all, without an inspection by a physician, just taking the agent's word that the child is in good health; they insure the child for so much without anyone seeing it but the agent. I do not see how the companies figure it out, but many of them do this kind of work at a small premium. I do not see how a man can walk in and look at a child and say that it is a good risk. I believe the time is coming when the companies will pay the twenty-five cents difference and have an examination made in every instance. It is to be hoped that it will come. The fraud that is practiced by this class of people is remarkable where backed up by the agent, and I believe that this class of people that take industrial insurance are more anxious to take it as a class than those who take ordinary life insurance.

I would like to report a case in which an industrial agent wrote a boy up for a policy of \$1000. I was sent to examine him, and after the examination I asked him to give me a specimen of his urine. He said that he could not furnish me with a specimen at that time, but would furnish me one in the morning and that his father would bring it to my office. I objected, but the next morning the father brought up a specimen which I could not accept. I saw him and told him to give me another specimen, but he said he could not favor me at that time. I went back the next day and he said that he was unable to give me a specimen at that time that the first specimen he had given me was all right. I went back and he said that he did not care to be bothered about the insurance. He finally brought a specimen to my office and in my absence Dr. Guest took the specimen and we found albumen. We notified him to come once more; he came and I went back to the toilet room with him, and as a matter of courtesy I turned my back, and the bottle of urine that he gave me was absolutely cold. He went through the proper procedure in giving me that specimen. He must have had a rubber receptacle in which the urine was contained. I believe that this attempt at fraud was due to the step-father who was an agent and desired insurance on his step-son knowing that he was not entitled to the same, as all future specimens passed in my presence showed albumen.

OPERATION FOR THE REPAIR OF COMPLETE  
LACERATION OF THE PERINEUM.\*

BY C. E. RISTINE, M. D.,

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MY object in presenting this paper is to briefly consider one of the most serious injuries which may be sustained as a result of child-birth, viz: Complete laceration of the perineum; and to present a surgical procedure—entirely original—for its restoration to practically a normal condition.

It was no small degree of pride, I assure you, that prompted and stimulated my effort in the preparation of this paper; and I take advantage of this opportunity to humbly acknowledge the high honor conferred upon me by recognized authors in giving me proper credit for the operative procedure which I shall endeavor to clearly portray to you.

Of those who have made complimentary reference to my operation, I make mention of Dr. Howard Kelly, of "John Hopkins;" the late Dr. Wm. Pryor, of New York; and Prof. E. E. Montgomery, who in his second edition of "Practical Gynecology," published in 1903, presents two of my illustrations on pages 275-276, and on page 277, gives a brief description of my procedure.

On May 11, 1899, I read a paper before the Knox County Medical Society, which described my operation, and some months later (at the request of Dr. Howard Kelly) I contributed an article for publication in the *American Journal of Obstetrics*, describing the same procedure as in the first mentioned article. The three illustrations accompanying this publication are fairly good; and, as is often the case, a better conception of a surgical procedure can be obtained from an illustration than from a verbose text. Believing this, I have had some crayon sketches prepared, which I doubt not will aid me in demonstrating to you the various steps in the operation.

Of the many surgical devices brought to the notice of

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\* Read before the East Tennessee Medical Society.

the medical public for the relief of this condition, none have fulfilled our expectations; however, the merits or demerits of these I shall not consider, only in a general way, so as to demonstrate the superiority of the authors method over all others.

No doubt every surgeon and gynecologist before me, has had his share of failures in his effort to repair this lesion, and to those of you who fail to secure uniformly good results, it would be well for you to adopt a plan of operating that could be depended upon in every case, provided always, that its technique is thoroughly understood and adopted.

Needless to tell you that all previous operators who have devised means for the closure of this combined perineo-rectal tear, are alike in one particular step, that is, the stitch or stitches in the rectum (provided the rent exceeds an inch in length); while the operation which I devised and carried into effect, avoids the rectal stitch, converts a complete into an incomplete laceration before a stitch is inserted.

There are certain principals essential to success in all operations, with the majority of these you must be fully acquainted. The patient should be prepared as for a major operation. I shall not consume time by giving other details—such as position of the patient; anesthetic to use; proper light; number of assistants; instruments necessary, etc., etc., as all of these will suggest themselves to you. Specially desirable in this connection is it, that the bowels should be emptied and carefully irrigated, so that there shall be no evacuation of feces to embarrass the operator.

While the occasional operator may—and usually does—mark out or outline the area which he wishes to denude, the more frequent operator seldom finds it necessary; but in any case, the denudation should be so uniform when complete, that when the lateral raw surfaces are brought into apposition, they should fit with such precision as to transform the mutilation into perfect anatomical and physiological relation.

My mode of procedure is as follows: Outlining with

my eye the extent of the lateral denudation requisite to construct a perfect perineum, and noting the extent of the rectal rent, I begin high up in the vagina, and dissect off an apron or frill of mucous and cicatricial tissue, corresponding to the extent of the vaginal tear, and proportioned to the length of the rectal laceration, down to the apex of this rent, making sure to have enough of tissue when released from above to fold over the rectal rent and extend somewhat beyond the sphincter ani when that shall have been closed. Extending my dissection laterally to

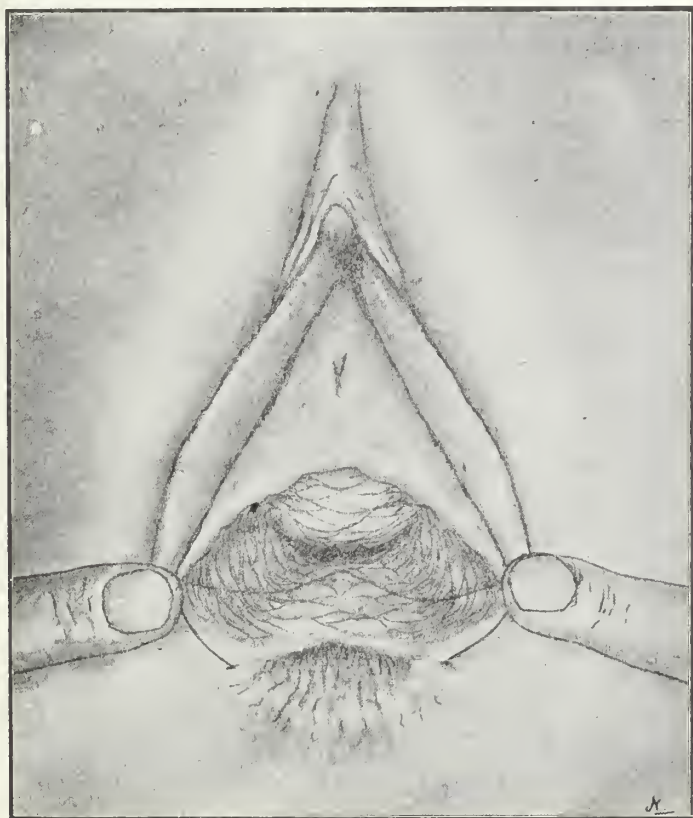


FIG. 1.—Showing outline of incision.

the points I have selected for the lower border of the future vagina and upper of the perineum, I continue down the torn edge of the perineum (at junction of mucous mem-



brane and skin), to a point well below the pits representing the retracted ends of the sphincter ani muscle. Just here is where failure overtakes many operators; not only should the integumento-cicatricial tissue surrounding this

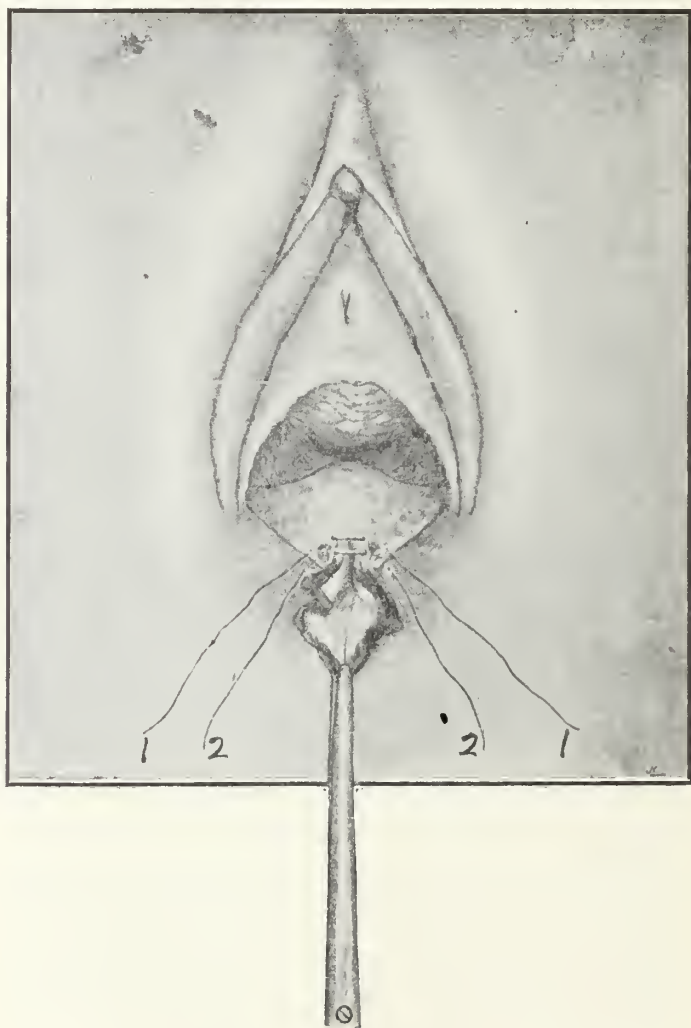


FIG. 2.—Flap dissected off and turned down into rectum. 1,1, Catgut suture passed through sphincter ends. 2,2, Silkworm-gut reinforcing suture passed deeper through tissue of sphincter muscle.

pit be freshened, but most essential, stretch the sphincter ani muscle, draw out the retracted ends with tenacula, and scarify them thoroughly. Dissect the lateral flaps down

as close to the rectal tear as it can be carried without interfering with its integrity at this point.

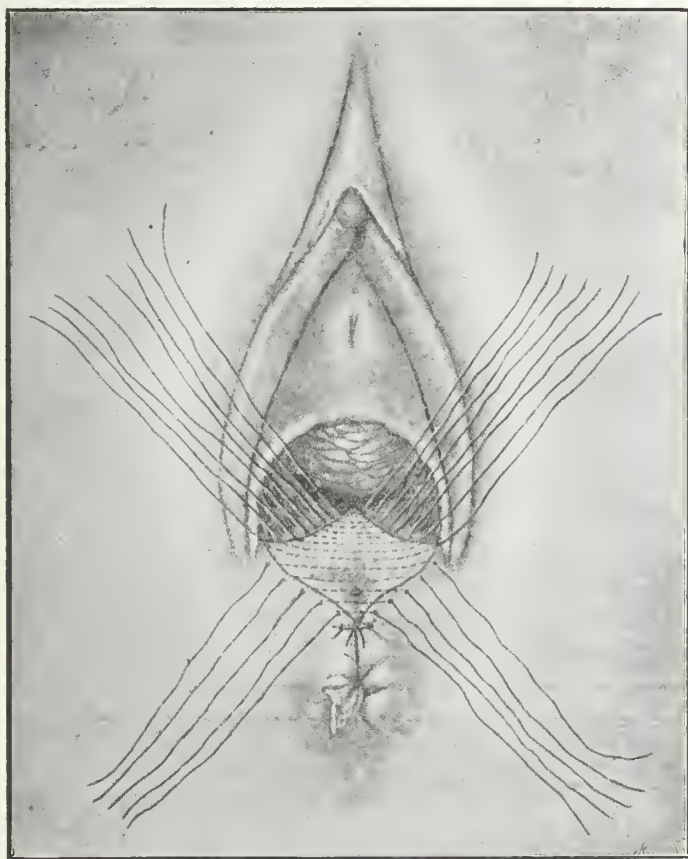


FIG. 3.—Reinforcing sphincter suture tied and other sutures in place.

During all this dissection avoid button-holing the apron or frill. Now having freed the apron from all attachments, save that to the margin of the rectal rent—which must not be disturbed—I invert the apron into the rectum, thereby converting the smooth vaginal tissue into a lining for the anterior rectal wall, and leaving a raw perineo-vaginal surface to be dealt with as we would a simple Hegar perineorrhaphy, except the union or adjusting of the sphincter muscle, which is accomplished by passing a chromocized cat-gut suture through the drawn out ends of the muscle; gentle traction is made upon this suture,

causing the ends of the muscle to approximate; now pass a silk-worm-gut suture through skin and muscle, taking a more secure hold, so as to reinforce and release the strain on a cat-gut anastomosis suture, and place the sphincter ends in comfortable apposition when this suture is tightened.

Observe now that we have only a simple incomplete laceration to deal with, the rectum securely shut off, and no stitch in it to carry infection or require removal. I now place the vaginal and perineal sutures just as we do in any simple perineorrhaphy; vaginal of chromocized cat-gut and perineal of silk-worm-gut, the latter I always shot either with or without the silver wire coil.

In an extensive denudation you will do well to whip the whole denuded surface together by a two-tier running catgut suture as advised by Barton Cook Hirst, beginning in the upper angle of the vaginal denudation, running down the deeper part of the wound, just short of the sphincter, and returning in the vagina to a point opposite the original insertion, so that the two ends are joined by a single knot; or this can be done by a buried figure 8 cat-gut suture as recommended by Howard Kelly. The object of either of these sutures is to avoid dead space.

I do not use a pad or other dressing over the sutured area. The nurse is instructed to throw a stream of bichloride solution 1-5000 over the vaginal lips after each urination, whether the act be accomplished with or without the aid of a catheter. After the third day, a vaginal douche of warm water containing a little boric acid is given.

In order that the bowels may be kept fluid and moving, which I desire from the first, I order a tablespoonful of Compound Liquorice Powder in half tumbler of water to be given as soon after the operation as the stomach will tolerate it, and repeated at intervals sufficiently often to secure two or possibly three liquid or semi-liquid stools in twenty-four hours. While this makes an ugly looking mixture, it is extremely palatable, and seldom objected to even by the most fastidious.

The stitches are removed in eight or ten days. The patient is not permitted to assume the erect position until ten days later.

The majority of operators shackle the knees with a bandage; I say please don't; the necessary recumbent position inflicts enough of restraint without unnecessary immobilization of a part of the body, the movement of which can in no way interfere with the integrity of the recently adjusted tissues.

I anticipate that some one will ask, what becomes of all the apron we have turned into the rectum? You will be surprised how quickly and effectually this disappears by absorption and atrophy; by the time the patient is permitted to be upon her feet, an examination of the rectum will reveal the presence of no excess of tissue.

By this operation we avoid the possibility of a recto-vaginal or a recto-perineal fistula. We avoid the undesirable stitch in the rectum which permits, yea, invites infection, while its removal is often a source of annoyance. We avoid the enforced constipation with all its attendant discomforts.

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## CERTAIN MANAGEABLE PHASES OF INSANITY.

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A STUDY of insanity shows that it bears very directly upon community interests. It is a question in sociological relation to the varying strata of society. The successful demonstration of the mechanism of tuberculosis and the results obtained from the wide spread dissemination of common-sense rules for its prevention, points out the way such conditions bearing upon community welfare should be handled. We owe the same duty to the public in regard to insanity which we have striven to perform in regard to tuberculosis. The same poverty of interest and intention existed towards "consumption" a short time ago, as now exists toward insanity. That the con-

ception of mental disease as a mere factor to be studied only as it concerns public safety, still persists strongly in the public mind, must be admitted. Further, so long as this idea controls the situation, just so long will the asylum be regarded as a "mad-house" and not as a hospital; and just so long will the interests lie dormant which, if properly stimulated and instructed, could be made to operate against the causes of the disease in a prophylactic way.

The layman knows little of a protective nature against the development of abnormal mental attitudes. That he sees little abnormal in his daily life is shown by the surprise and consternation when insanity develops in his family or vicinity. Certainly it is clear that the public horror of the asylum is due to a deep rooted ignorance of the causation and development of mental disease, to say nothing of its modern treatment and control.

This attitude means woeful mistreatment of mental abnormalities, especially in their incipency, blind pushing of defective or poorly balanced precocious children, and wanton neglect of proper regard for disordered nervous conditions. As physicians we should study the mental status of our patients more, and the outcome of the future held clearly in mind. Certain premonitory principles of mental disease should be mastered by all, and the mechanism of the most frequent forms of mental deterioration should be understood. During the stage of development is when the general practitioner sees the cases, and it depends upon his acumen to save patients from future insanity.

As physicians our attitude is apt to be centered upon getting results, to have the patient back in his office as soon as possible, to get the child back to school with the least delay, and the mother back to the household before the cook breaks all the china. Practically all of our cases admitted to the hospital have been treated for a period of from several weeks to a year for trifling physical complaints, and it is rare that the general practitioner foresaw (until the actual outbreak) the dangerous drift of the patient. In our zeal to get the patient well, do we not



ignore the mental side of our cases? How readily the depression or excitement is attributed to physical states. How little do we probe into the habitual mental reaction of our patients and see whether there is anything behind such statements as "she is down hearted one day and laughing the next;" or "she just worries herself sick;" again "she isn't just well, she broods too much." Such statements made concerning the growing youth or girl—the housewife or the active business man or woman—should certainly lead to a searching inquiry into the mental state. The emotional reactions should be inquired into, especially their consistency or inconsistency to exciting factors. Habits of thought should be studied, holding in mind the peculiar thought-blocking process so characteristic of the beginning manic depressive state. The continual tendency to "harp" on certain ideas—known as worrying—too often form a basis for the beginning of that most common and widespread disease, dementia præcox (Kræpelin). It must be thoroughly understood that the constitutional make-up of our patient determines how he will react to physical conditions, and the one who fails to lay proper stress on this fails to understand his cases.

In mental diseases the manifestations are extremely complex and apt to distract one from direct and simple reasoning into the cul-de-sac of unprofitable speculation. Our understanding of the relation of special factors to a situation under investigation revolves on our knowledge of the weight for modification of factors for the course of developments. In psycho-pathology the kinds of possibly active principles involved are usually much more complex than ordinary pathology; the number and qualitative differences of the factors involved greatly complicate the situation. For the purpose of the present paper a detailed inquiry into separate factors is not attempted for reasons stated. Several practical, it is to be hoped, simple principles of development in insanity only will be presented.

First, it should be remembered the severest test of vulnerability to poisons, to infections and to disorders of metabolism is the test of endurance; the same holds for the

effects of habits, of strains and excesses on the regulative balancing function of the organism, and owing to the multiplicity of the factors in the foundation for mental activity there are many types and directions of biological issue to be attacked. One must remember the division of labor shown first by the data of localization of the nervous system; in the second place, the division of labor shown in the nutrition of the brain (circulation and metabolism); in the third place, the functional disposition of the curve of activity of the components—all showing how difficult is the question of whether a dove-tailing with new requirements is easy or hard—and with what ease an individual passes from one state to another, from one interest and one emotion to another, and especially to the states most likely called for by the actual situation demanding adaptation.

One sees in these elements the difficulties of discussing etiological factors separately, whereas the introduction of a simple new factor will invite a reaccentuation of another element. For instance, we recognize alcoholic insanity, yet we know under this caption alone we may have alcoholic paranoic states, hallucinoses, pure depressions and again chronic dementia. Yet alcohol may precipitate a manic depressive state—a dementia præcox or paresis—and yet all these conditions may be brought about by many varying causes, from which alcohol may be absent. Therefore rather than point out a long list of causative factors I wish to describe a certain process which shows itself so frequently in general practice in dealing with a great variety of general conditions.

The mechanism which is to be described applies to Kræpelin's "dementia præcox," so difficult of recognition except as seen in the insane hospital, and yet making up a large group of our admissions (30 per cent.) The general rules are helpful in sizing up the mental status of all patients, whether they fall in this group or not. The points which one should bear in mind are: That it is a type of emotional insanity, wherein lies the deterioration; that it often begins in early life and its course is often slow, run-

ning into late adult life—and compatible with relative intellectual clearness, or even a certain precocity.

The condition is shown by a peculiar unbalanced emotional display, by incongruities of action and emotion, by perversions of normal instinct and a peculiar lack of proper vital action and reaction in meeting ordinary situations. The person shows a tendency to "harp" on certain ideas, in an odd and incongruous way, with an insufficiency of provoking factors—the oddity and incongruity rather than a mere excess of what might be the result of a sufficient cause in an average person, constituting one of the most important criteria of the estimation of the seriousness of the process.

In a great many cases of such type which tend toward mental deterioration there are certain reactions which occur in such frequency as to be borne in mind by the general practitioner and lead him to warn the patient or his friends of the danger. One sees these reactions in what we are wont to call neurasthenia hysteria, nervous breakdown, and other names which are the waste basket of exhausted diagnostic skill. To explain further we must point out the responses to situations which are most harmful to the mind and which, if indulged in, lead to mental deterioration. We see first as symptoms of defective brain mechanism what is termed by Dr. Adolph Meyer, "acts of perplexity or an evasive substitution." We may quote as follows: "Some of the reactions to emergencies or difficult situations are mere temporizing attempts to tide over the difficulty, based on the hope that new interests crowd out what would be fruitless worry or disappointment; complete or incomplete forgetting is the most usual remedy of the results of failures and just as inattention and distraction correct a tendency to overwork, so fault finding with others, or imaginative thoughts, or praying or other expedients are relied upon to help over a disappointment, and, as a rule, successfully." Of most practical value, however, are the symptoms which one sees so often in general practice—the uncontrollable tantrum, the hysterical fit, which the physician can find

no explanation for, and the patient gives only a rattling fumbling idea of, or perhaps the suggestion of an under-current with a false lingering attitude which the examiner places again as mere hysteria, and misses a chance to save a case from deterioration.

Having begun a series of false reactions to a situation which is at first a remedy of a difficult situation can become a miscarriage of the remedial work of life, just as fever from being an agent of self-defense may become a danger and more destructive than its source. Continual false reactions to their surroundings produce what we see as hypochondriacal trends, ideas of reference, fault findings and suspicions, or attempts to get over things with empty harping, unaccountable dream-like nocturnal episodes—often with fear and hallucinations—which lead to strange conduct—ideas of dread diseases—and when seen by the physician show either depression or stupor, or extreme volubility with fantastic warping of slight bodily symptoms. All the symptoms appear either on the ground of a neurosthenoid development, or at times precipitated suddenly by some trifling illness which brings the patient to the physician. We see on close mental scrutiny that the patient often has insufficient excuse for his condition, that he is habitually dreamy, dependent on his adjustment to the situation of the world, rather on shirking than on active aggressive management, scattered and distracted either in all the spheres of habits, or at least in some of the essential domains of adjustment which must depend more or less on instinct of habit. Upon this ground, we see in our patients as evidences of this substitutive type, this incompleteness of reaction, the inadequacy of the psychosthenic, the hysteric, becoming manifest in the absurd fantasies of Christian Science, Spiritualism, religious ecstasy, etc., resulting from a puzzle state from which the individual finds no adequate relief save in some weird purely imaginative basis for his strange conduct. And all this in the face of relative rational clearness in regard to certain fundamental relations. These types may occur in the successful merchant, in the professional man, many

otherwise healthy people. Yet the reaction-type described forms the basis for stereotypic and automatic reasoning, paranoic developments, gradual loss of elasticity of reasoning, and finally emotional deterioration.

Now therapeutically what does all this mean? Simply this, that in all our patients from whatever illness they are suffering, that we should take the greatest care in sifting out the reaction type, that we should not stop at a mere physical interpretation of our patients, but should concentrate our attention upon the manner in which the patient regards himself, the importance of his habitual manner of reacting to his surroundings, laying great stress upon the oddities and incongruities which may crop out in his description of his illness, the way in which he regards his physician, to sum up his complete emotional interpretation of his experiences. In this analytic way one should seek for evidences of the substitutive, self-saving attitude, the tendency to dreamy, abstract harping upon certain phases of an illness, and the automatic reasoning of the puzzled mind. These symptoms are progenitors of a subtle deteriorative process.

To come back to our first premise, as long as "consumption" was the leading concept of the dreaded condition of tuberculosis its recognition very often came too late to make therapeutics tell. If dementia is the leading concept of a disorder its recognition is the declaration of mental bankruptcy. To-day the physician thinks in terms of tuberculosis infection, in terms of what forms its development or suppression; and long before consumption comes to ones mind, the right principle is at hand—change of habits, of breathing purer air, of physical and mental ventilation. Now in the same way general practitioners should learn to recognize certain working factors in the production of insanity, and by the ferretting process discover out from beneath the physical symptoms the undercurrent of harmful mental rumination and self-centerization. The mental balance depends upon completeness of its own reactions and when these reactions become a jumble of puzzled substitutive, often mystic habits, the influence



upon the vegetative mechanism means unexplainable action and mental deterioration. The general principle is that many individuals cannot afford to count on unlimited elasticity in the habitual use of certain habits of adjustment, that instincts will be undermined by persistent misapplication, and the delicate balance of mental adjustment and of its material substratum must depend on a maintenance of sound instinct and reaction type.

These suggestions will amply repay one to follow out in the consideration of the cases of nervous "peculiar" children and youths; one is called by the parent to advise in the so-called group of over-worked business men and women who, for some unaccountable reason, run just a certain length of time and stop. One may find abnormal types revealed by almost any accident or emergency in the practice of medicine or surgery. Especially one sees them in the worrumsome cases whom gynecologists fail to relieve by radical work. Efforts should be made to clear up the undigested experiences of the patient, new habits of thinking and reacting should be suggested, and the family warned of the dangerous drift of the situation. The main plea of this paper is to point out the premonitory symptoms which warn of developing mental deterioration, and it is in the stages described and with the characteristics described, that one finds a group of manageable but little looked for causes. If one understands the determining factors, the conviction of our common sense is to institute correct habits, and reinstruct the patient into complete reaction to his situation. Break the vicious circle of habitual mental associations and a step to save the case from insanity is taken.

Did we but scrutinize our cases of alcoholism, our patients with drug habits, our sufferers from chronic invalidism, and defaulters from libidine sensuality we would find in these the mechanism of a substitutive reaction, the working of a mind which will not meet the situation square in the face. And in the excuse for conduct of these patients we find a true incongruity of emotional tone, the first and fundamental symptoms of mental deterioration.

Whenever we find instances of such reaction we should be on our guard that the true nature of the case may lie in an actual beginning mental alienation and the condition which necessitated the physician—a result of substitutive reaction. It is with such cases, and in such stages, that the general practitioner sees them and the time to institute rehabilitation and rehabilitations is then, and not when the patient is sent to the hospital with fully developed alcoholic insanity, dementia præcox, or manic depressive insanity.

(TO BE CONTINUED.)

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## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, JANUARY 8, 1907.

DR. J. R. WATHEN: Gentlemen, along with the presentation of this clinical case I wish to present the pathological specimen. This is Mr. —, whom I asked to come before us this evening for the demonstration of the method I am employing in abdominal work.

The history of this case is as follows: The patient is a young man of 30 who was taken one night with severe pain in the region of the appendix. When seen the next morning his pulse was 110, temperature 102.5. There was rigidity of the abdominal muscles and pain upon pressure over the appendix. This was the second attack. He had had a similar one two or three months before. He was sent to St. Anthony's and I removed the swollen appendix which was adherent to the cæcum. I closed the abdominal incision with cat-gut and the patient was out of bed on the eighth day walking about the hospital, leaving the hospital on the thirteenth day after the operation.

The point I want to make in this case is this. I have been trying a technique in the last year in abdominal cases in which I get the patients out of bed in the first week, and out of the hospital at the end of the second week. This depends upon whether I have any suppuration or have a clean abdominal wound. Morris claims to remove the appendix by an inch and a half incision and have the patient out of bed in a week and a

half. I do not endorse this. I believe the incision is too small and I believe we should reverse the order in some respects.

My objection to a small incision is that when retractors are used the tissues are bruised and there is a tendency to delayed union or bad union and suppuration.

I wish to outline the technique I have employed in the last year. The incision should be large enough to allow the operator to work rapidly. The main point is where the incision is made. I believe it is impossible to close the abdominal wound approximately except in one place that is through the rectus muscle—at the outer border, or the inner border of the rectus. I do not believe when we cut the muscle at any other point that we ever get as firm union no matter what method is used. When we make an incision at this point we can rapidly enlarge it and make it just as large as we wish. We cover the edges of the wound with moist gauze and make gentle traction with the retractors and there is no bruising of the wound. Another important thing in closing wounds is that I use twenty-day cat-gut instead of ten-day cat-gut. The twenty-day will not stretch for at least ten days and you get firm union. The firm union is due to the fibers of the external oblique. I overlap this aponeurosis. That is another point in the strength of abdominal wounds overlapping and stitching. I prefer a Bott subcutaneous stitch with twenty-day cat-gut. I place directly on the wound adhesive plaster.

This man whom I present is Mr. —, who was operated on two weeks ago yesterday. He has been out of the hospital for a week, leaving the hospital on the eighth day after the operation. I wish you would look at the wound and the strength of the wound. This method, while it involves nothing original, is a combination of several methods.

The next specimen I present is from a young man of 19 years. He is still in the hospital. He had been feeling bad for several days and the day before I saw him he was taken with a sudden sharp pain in the region of the appendix. His pulse was 90 and temperature 102. The right leg was drawn up and the muscles rigid. There was distinct pain upon pressure in the region of the appendix. He was sent to St. Anthony's hospital and I removed an inflamed appendix adherent to the small intestine. The next morning his pulse was 90 and his temperature 101.5; in the afternoon his temperature was 102.5. He was given a grain of calomel and his bowels moved nicely, having been hard

to move before the operation. The temperature continues to rise and this afternoon it was 103. My diagnosis and that of the attending physician is that it is a case of typhoid starting with an attack of appendicitis. He has now developed a typical typhoid tongue. I believe that the sharp shooting pain was due to appendicitis which was relieved by operation. I believe that the starting of the appendicitis was the typhoid germ, and I believe that he now has typhoid fever. I would like for the members of the Society to tell me what he has.

DR. ABELL: I would be very anxious to see a blood count in this instance. It is possible that he may have an infection in this tissue left behind in the appendix or with the suture material at the base of it. It is possible that that could be the case. The blood count would be interesting, and if it shows a marked leucocytosis I would be inclined to the view that it was due to some localized infection rather than typhoid.

DR. W. H. WATHEN: I have nothing to say more than the fact that we may have associated with typhoid fever sometimes in the beginning or later appendicitis. I think a pathological examination of the appendix would be of value and would probably show the presence of the typhoid germs in this organ. Yet, let that be as it may, the appendix inflamed with typhoid or not should be removed; it adds nothing to the danger of the typhoid condition practically at all, and it eliminates a condition that may result in the death of the patient just as in appendicitis from any other cause. I am sorry that there could not have been examinations made of this appendix.

I hardly agree that an infection occurs and brings on the symptoms that are found in this case. At least it has not been my experience—and my experience has been quite large in the last several years in appendix operations—and I have not found an infection bringing on these symptoms, except where there was pus formation and infection that extended beyond the outside of the appendix.

DR. MARSHALL: Speaking just a moment to the second case first, I think the history of the case as it goes on will clear up the diagnosis, and I do not know of any other way you will be able to do it.

As to the Z. O. plaster dressing, I am glad to see its use in abdominal wounds in that way. I have been using it in that way in dressing amputation stumps and in dressing head injuries and scalp wounds. I used adhesive plaster a good deal applied directly to the wound.

DR. MORRISON: Just along the line of appendicitis following typhoid fever I can only add a case if I may. About three years ago I saw a case with Dr. Chenoweth. When this young man was first seen his tongue and general condition looked like that of typhoid. He had been sick several days. Shortly after this he developed symptoms of appendicitis. He had pain in the region of the appendix, rigidity of the muscles and his pulse became more rapid. The abdomen was opened and the appendix removed, and the boy went on and had a typical case of typhoid fever. He was sick for about four weeks. He had the rose spots, and while I did not make a Widal test, the urine gave the Diazo reaction. Every indication was typical of typhoid.

DR. FLEXNER: We know that the typhoid bacillus attacks the appendix here and there just as in such cases as Dr. Morrison reported, but I believe Dr. Abell's suggestion in connection with such cases would complete or add a great deal to the diagnosis, and, as he says, if we should find a marked leucocytosis, it would indicate very strongly that we had a local pus collection or infection of some sort.

I do not know whether I have ever stated it here or not, but I think we suffer materially here in Louisville in comparison with some other places as to the matter of laboratory facilities.

While on a visit to the East recently I saw at Mount Sinai Hospital some of the most interesting diagnostic work in connection with typhoid fever that I have ever seen. The diagnosis was made promptly in twenty-four hours and in one case in sixteen hours after the patient entered the hospital. The diagnosis is made by stab cultures. They furnished some of the most exquisite test-tube pictures that I have ever seen. The appearance of the typhoid colony is typical. The doctor would take up a test tube in the electric light and was able to say, "This is typhoid and this is not." Some such means as that in connection with Dr. Wathen's case, together with a leucocyte count, would be invaluable. In Germany they are using a bile medium, which is a perfectly rational procedure.

DR. J. R. WATHEN: There is little that I can add in closing the discussion. I admit that the case is incomplete, and I presented it to get the opinion of the members. A case of typhoid complicated by appendicitis is always a grave condition.

Dr. Deaver has collected seventy-eight cases, eight or ten reported by Murphy in which typhoid was associated with appendicitis. In only twenty-three of the cases was it necessary to



operate on the patients for appendicitis. In some cases there was a mistaken diagnosis, and the patients were operated on for appendicitis when they really had typhoid fever. They all admit that the complication is grave only when you operate in the second or third week of the typhoid, and not very grave when operated on at the onset of the fever. In this particular case I shall be glad to give the Society a further report as to whether the typical spots occur, and I shall be delighted to make a blood examination.

As Dr. Flexner says, we ought to do more blood work. Recently, while on a visit to Deaver, he showed me much of his blood work. Before he operates, he states that this case shows so and so, and we will operate and see. Deaver does not personally make his blood counts. If I knew of anyone that would be interested in blood counts and the opsonic index I would turn the work over to any man doing that line of work.

DR. DABNEY: I have a little specimen here that may be of some interest. I am sorry that neither Dr. Cheatham nor Dr. Coombs is here. The man was referred to me by one of the large manufacturing concerns here in the city, and came into my office about 10 o'clock in the morning. He had a jagged wound through the upper lid about half an inch in length, and the lid was drooping. It was difficult to examine the eyeball. The vision was reduced to one-tenth of normal sight. There were hemorrhages inside of the eye that made an ophthalmoscopic examination practically impossible.

The most interesting feature of the case when first examined was the extreme softness of the eyeball. It was so soft that I felt that the man had a perforating wound of the eyeball, I have never seen an eyeball so soft that had not been perforated, but I failed to find any perforation. I sent the man to the infirmary, and we looked again very carefully for a perforation, but there was none in the front portion of the eye. I had no doubt but there was a small wound that had closed over. We put the man in a chair and placed the magnet down close to the eye, and the use I put the magnet to was to see whether there was a piece of steel in the eye. When the magnet was placed close to the wound in a second I heard a sharp click, and the piece of steel came out and caught on the magnet. Evidently it went deep into the orbit, probably two inches back, and the magnet had drawn it out through the wound very prettily.

The man has made an excellent recovery, and I have thought

that it must have been a mistake to suppose that he had any perforating wound of the eye. The sight is nearly normal, and the tension is restored, and the sight is nearly perfect. This case illustrates the use of the magnet to remove a piece of steel from the orbit.

I have seen many cases where the piece of steel penetrated the vitreous. I know of one young man who is now suing the company for which he worked for the loss of an eye. The man is permanently blind. The eye presents no bad symptoms, but it is always a menace. It gets less as time goes on. If it had not been for the magnet we would have removed that man's eye. It might have been better. The point I am making is that to save a blind eye where a foreign body has penetrated the interior is a doubtful procedure. This depends much on the social position, and in a young girl a little risk should be taken, but in a laboring man I doubt whether the risk should be taken.

Now, sometimes we remove a foreign body from the anterior portion of the eye and get a good sight. Where a foreign body is removed from the vitreous by the magnet such a result is doubtful.

This case is interesting because the foreign body was removed from the orbit. There was a severe contusion of the eye with hemorrhages into the vitreous, and there was a wound in the ciliary region, producing this loss of tension.

THE  
American Practitioner and News.

"NEC TENUI PENNĀ."

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**Editorial.**

*The Evil of  
In-Medical  
Examination.*

The subject of medical education as well as education in general is so very important a subject and the constant education on this subject makes the following editorial (taken from the *Medical Record* of March 30th) of great interest in the aim of medical education, and brings to bear an unusual feature of medical education as cited by Dr. Shaw in his oration to the Huterin Society. His address on the true aim of medical education and the evil of examination fetich as a commemoration to Dr. John Hunter. "He cites at the outset that Hunter's defective preliminary education with his later extraordinary mental development, and even his tragic sudden death, should be cited in support of the theme. Not that it was suggested that his amazing work and development were to be considered due to the fact that he could not have passed the equivalent for his day of one of our preliminary examinations when he began his life work, but it was an open question whether a school and college course might not have produced a merely successful practitioner instead of one of our most brilliant thinkers. Possibly his protest against the requirement of preliminary instruction, in the

excitement of which he expired, was occasioned by the recognition that such barriers would have shut him out from the career in which he must have known that he had attained remarkable success. Dr. Shaw referred to Hunter's crabbed style as due to his defective early education, and commented on the rarity of the two-fold power of searching out the hidden facts of nature, and telling in clear language the truths one has found; but a facile pen might have drawn him from the bench to the writing table, and, after all, 'if he could have told us more fluently what he saw, would he have seen much.' "

The lecture proceeded to show the blighting influence of the examination system of both teachers and pupils. He maintained that the fetich of examination is gaining a hold, year by year, that its influence is wholly detrimental and its effects demoralizing. Yet it would be easier for medicine than for some other studies to free itself from this evil. The ideal examination of those who worship the fetich is conducted by one who knows the candidate only as a number. How can he test the powers of the mind? One point he can try, that which is commonly spoken of as "the knack of passing," the ability to keep a store of facts on the surface and pour them out rapidly in presence of a stranger—a power essentially depended on by the crammer—"a mixture indeed of memory and cheek." Dr. Shaw admitted this power was an attribute of mind, just as bulk is of muscle, but said to worry a man who wants to develop his mind with continual investigations of his memory was as senseless as periodically to test the lifting powers of a man who was learning the violin. As in one case, the subtle power of co-ordination would be lessened, so in the other case would cramming deteriorate the higher intellectual faculties. No sooner does the medical student become acquainted with his teachers than the chilling specter of the examiner comes between, and both are handicapped at every step by the question. "Will this pay at exams.?" Dr. Shaw admitted that after his twenty years' teaching, he knew too well what would pay in this way, and he knew, too, that many a student's desire for

knowledge, power of observation, capacity for reflection, judgment, and reasoning faculties have been crushed by the domination of the examination fetich. In no calling are the highest faculties more necessary than in ours. It is useless to develop only a power to collect facts in a man destined to practice. A man primed with the knowledge of the possible beliefs of his examiners may be incapable of exercising a sound judgment of such beliefs. No mass of facts in his memory will serve in diagnosis the man who has not trained his eyes, ears, and fingers, as well as his brain. Dr. Shaw would have inspection replace some of the examinations, and records of work done allowed to count toward marks for qualification. He would have bedside work and that done in the post-mortem room and in the laboratories given their proper value. Tangible results of a student's work, could, judged by his clinical records, his charts, his bacteriological, chemical, and hematological reports, and pulse tracings, photographs, drawings, and so on, to be kept available for surprise, visits of the inspector. Much better would such a record be than examination tips by the crammer. Dr. Shaw believed that such inspection would ultimately be acclaimed as a means of "overthrowing the examination fetich and allowing us to attain the true aim of medical examination." The author of this address from which we have quoted is to be congratulated on his courage in stating his views, and still more perhaps on his own escape from the evils of the fetich of which his university (the London) was so long the high altar.

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#### NOTES AND PERSONALS.

WE wish to thank the Mellin's Food Co., for the very neat and useful pocket memorandum that were distributed through their able representative, Mr. Paul H. Hirth, who visited this city recently.

WE wish to call your attention to the fact the *Medical Mirror*, one of the most prosperous medical journals in the country, has consolidated with the *Medical Era*, retaining the name of the *Medical Era*. The first issue will appear in April, and edited by



Drs. S. C. and C. M. Martin, of 3530 Franklin Ave., St. Louis, Mo.

DR. JOHN L. POMEROY'S ARTICLE.

In this issue we are pleased to present the first of a series of articles from the pen of Dr. John L. Pomeroy, of Ward's Island, N. Y. Dr. Pomeroy is a former Kentuckian, and has for the past few years been prominently connected with the New York State Insane Asylum, and his writings will be of a practical character, of special interest to all medical men. The article in this issue under the title of "Certain Manageable Phases of Insanity," should be read at least by every physician doing general practice. We confidently believe that if what we may term "premonitory or prodrome" mental symptoms were more thoroughly understood by the general practitioner a great good might be accomplished in bringing about changes that would correct those mutual aberrations before all rationality was dethroned. We most cheerfully commend these articles to our readers.

TIMELINESS of interest, aside from any other condition, lends especial importance to the announcement of the early publication of *Foods and their Adulterations*, by Harvey W. Wiley, M. D., to be immediately followed by a companion volume, *Beverages and Their Adulterations*. Dr. Wiley is Chief Chemist to the United States Department of Agriculture, at Washington, and his wide researches in the interest of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The fact that the new National Food and Drugs Law becomes effective after January 1st, and that public interest in it is now at white heat, will no doubt result in quite a demand for both volumes.

FOLIA UROLOGICA.—With Professor James Israel, of Berlin, as Editor-in-Chief; Professor A. Kollmann, of Leipzig; Dr. G. Kulisch, of Halle, and Dr. W. Tamms, of Leipzig, as Associate Editors, and the other principal urologists of Europe as collaborators, these new international archives are announced by the house of W. Klinkhardt, of Leipzig. Exhaustive original articles with colored plates and illustrations will be the principal feature of *Folia Urologica*. Contributions will be published in the four languages that are officially used in Congresses, and each paper will be summarized in the three other languages.

The new publication will contain a department entitled "Events in Urology" in which the regular collaborators will periodically report on the advances in this specialty, after having tested them critically in their respective services and laboratories. Finally *Folia Urologica* is to serve as a means of collecting the Annual Reports on urological work in hospitals, clinics, etc., throughout the world. With a view to publishing contributions as quickly as possible, the issue of *Folia Urologica* will appear as often as required. Contributions from North, Central and South American authors may be sent to either of the American Editorial Representatives, WILLIAM N. WISHARD, M. D., Newton Claypool Building, Indianapolis, Ind., or FERD C. VALENTINE, 171 West 71st Street, New York.

REQUIREMENTS for admission to the Medical Department of the University of Pennsylvania, which have recently been adopted by the Board of Trustees.

According to the plan finally adopted, the requirements will be increased gradually beginning with the annual session in September, 1908, and reach the maximum September, 1910. The present requirements cover four years graded course in a High School or its equivalent. The essential points in the new requirements are as follows :

I. For the session 1908-1909, in addition to the present requirements, either one of two foreign languages, French or German; (2) Physics; (3) Inorganic Chemistry, including qualitative analysis; (4) General Biology or General Zoology.

II. For the session 1909-1910, in addition to the requirements of 1907-1908, the candidate must have completed successfully work equivalent to that prescribed for the Freshman Class in Colleges recognized by this University.

III. For the session 1910-1911, in addition to the requirements of 1907-1908, candidates must have completed successfully work equivalent to that prescribed for the Freshman and Sophomore Classes.

IV. Candidates who have successfully completed at least three years of an accepted College Course, may be admitted with conditions in Chemistry, Physics and General Biology or Zoology.

Yours truly,      CHARLES H. FRAZIER.

## Recent Progress in Medical Science.

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### PEDIATRICS.

IN CHARGE OF

PHILLIP F. BARBOUR, M. D.,

*Professor of Surgery and Clinical Surgery, University of Louisville.*

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### PATHOLOGY.

IN CHARGE OF

E. S. ALLEN, M. D.,

*Professor of Pathology, Kentucky School of Medicine.*

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### PEDIATRICS.

**The Pathogenesis of Colitis in Man and Animals.**—Simon Flexner, M. D., and J. Edwin Sweet, M. D. (*The Journal of Experimental Medicine*, August, 1906). In this article the authors have recorded their observations upon the toxins of the Shiga and the Flexner bacilli. The dysentery toxin exerts its effects upon the central nervous system and upon the intestine. Sometimes one set of symptoms predominates and sometimes the other, depending upon the resisting power of the individual animal.

In the case of the rabbit it has been conclusively demonstrated that the lesions in the cæcum are caused by the elimination of the toxins of dysentery through the mucous membrane, and not by the contact of the germs or their toxins in the intestinal canal. Whether this is true in man or not has not yet been proven, though analogy certainly bears it out. It is believed that the dysenteric bacilli form their toxin in the small intestine from which it is absorbed, and is then eliminated again through the mucous membrane of the large bowel. The inflammatory changes take place equally in the mucosa and sub-mucosa, but other pathogenic organisms undoubtedly affect the diseased mucosa and more especially those portions of the transverse folds which project more noticeably into the lumen of the colon.

**The Treatment of Scarlet Fever.**—S. L. Polozker, M. D. (*Archives of Pediatrics*, January, 1907). The author sums up his views upon this subject under the following heads:

*First.*—The more thorough isolation of the patient.

*Second.*—Isolation for a while of other members of the family that come in contact with the patient, especially children.

*Third.*—More care by the physicians and those who wait upon patients.

*Fourth.*—A more thorough disinfection of premises after discharging a patient with scarlet fever.

*Fifth.*—Early diagnosis and more careful watching by the physician in mild cases of scarlet fever.

*Sixth.*—The use of antistreptococcus serum in all cases showing any tendency to be severe or accompanied by any complications, especially angina.

*Seventh.*—The removal of hypertrophied or diseased tonsils and adenoids in children.

*Eighth.*—The frequent examination of urine in scarlatinal cases.

*Ninth.*—The continued care of the patient until the desquamation is over and all complications are well; especially so with otitis.

*Tenth.*—Refusal of permission to go to school for the longest time possible consistent with education.

*Eleventh.*—The refusal of surgical and obstetrical cases by the physician attending many cases of exanthemata. The time will come when the exanthemata will be treated by a specialist only, a man that will confine himself to these cases (*sic*).

*Twelfth.*—Constant efforts to enlighten the laity upon the dreadful results of this disease and its complications, and for more rigid health laws.

**Whooping Cough: Its Treatment by an Improved Abdominal Belt.**—Theron Wendell Kilmer, M. D. (*Archives of Pediatrics*, February, 1907). The author recites his results in relieving many of the distressing features of pertussis by the application of a tight-fitting abdominal belt, which he describes as made with silk elastic webbing placed over stockinette in width depending upon the age of the child and about three inches less in circumference than the abdomen at the umbilicus, to be laced up in the back. It is claimed by many who have tried this principle that the child is much more comfortable, the vomiting is markedly relieved, and the paroxysms of whooping are less severe and occur at longer intervals.

**The Significance of Albumen and Casts in the Urine of Children.**—Frederic E. Sondern, M. D. (*Archives of Pediatrics*, February, 1907). The writer notes the frequency of albumin and casts in the urine from conditions outside of the kidney. They do not necessarily indicate an organic lesion of the kidney,

but a functional disturbance due to the failure of other organs to perform their duties perfectly. "While the evidences presented by the urine in decided acute nephritis, and in many cases of chronic nephritis are never simulated by those appearing in consequence of functional and non-inflammatory renal disturbances, still the differentiation between the latter and a mild or quiescent nephritis is very often not possible on the basis of albumen and casts.

"Sudden changes of temperature, cold baths, violent exercise, sudden changes in attitude, fright, extreme grief, surgical or traumatic shock, not limited to the kidney; anything that suddenly increases or lowers blood pressure, and a host of other causes may be named for the transitory albuminuria, due to changes in circulation or enervation. In these changes the diagnosis is simple, on account of the short duration of the condition in question and the easy detection of the causative factor in the clinical history.

"When the functional albuminuria is, however, due to changes in the composition of the blood offered the kidney for the exercise of its function, or to circulatory disturbances due to lesions of the heart or other organs, the condition is not transitory in the same sense, and these are the cases in which the differential diagnosis between functional and nephritic albuminuria becomes much more difficult. In them the mere consideration of albumin and casts is not sufficient, and repeated complete analytical results, combined with careful clinical observation, are always necessary, and not invariably successful at that."

Faulty metabolism is cited as having an etiologic relationship particularly to the intestinal form of nephritis. Intestinal auto-intoxication or toxemia frequently produces a functional albuminuria, which progresses into a true inflammatory nephritis.

#### PATHOLOGY.

**Malaria.** — W. Kraus states in a most interesting article (*Journal A. M. A.*, March 16, 1907) that a great many febrile conditions the etiology of which is obscure are treated as malaria; that such conditions as tuberculosis, sepsis, gall bladder trouble, liver abscess, and chronic nephritis come to the physician with the story that they have malaria in the system. This is a most unpardonable condition with our present methods of diagnosis. Nothing is more amenable to treatment than malarial fever, and a recent infection is almost never anything but a fever.



Malaria in the beginning is an infection by one or more groups of one or more varieties of blood parasites whose life function in the body is the destruction of hemaglobin. As long as the patient remains in a malarial climate the condition may remain acute through re-infection, especially when assisted by outside influences. The parasites resulting from segmentation do not invade new cells, but hibernate somewhere in the organism and become active when reinforced by a new infection or die when the patient moves to a non-malarial climate. Kraus holds that in these cases of chronic malaria without paroxysms quinine, as well as other factors disturbing the symbiosis, may produce symptoms of intoxication, including hemaglobin uria. The only time to give quinine is when developing parasites are found in the peripheral blood, provided that the infection is fresh, as shown by a characteristic through fever curve. Kraus advocates frequent blood examinations of persons living in malarial districts, even if well. His conclusions are as follows: *First*, There is not the shadow of an excuse for failure to make an exact diagnosis in all fever cases. *Second*, The blood of residents of malarial localities should be examined at frequent intervals. *Third*, Fever cases should be treated in a quarter with the findings of a thorough blood examination, with special reference to time of dosage and to the complete immunization of the individual for the sake of his neighbors. Quinine judiciously used in accordance with findings of the blood examination very rarely does harm; its prohibition on the ground of possibly producing a hemaglobinuria is unpardonable; its administration during hemaglobinuria is very dangerous and usually unnecessary; a blood examination will save such patients from almost certain death. The screening of houses and the destruction of breeding places of anopheles should be encouraged so far as possible, but the prophylaxis of malaria and its definite local eradication depends on the destruction of the parasite within its alternative host, man.

**The Pretuberculous Stage of Consumption.**—(*Medical Record*, March 23.) Dr. C. F. Beeson calls attention to the earliest symptoms of pulmonary tuberculosis before the physical and radical symptoms have become fully manifest. After noticing the usually recognized characteristics of the phthisical predisposition, he mentions as signs of incipient consumption an over-brightness of the eyes, with possibly slight inequality of the pupils due to reflex of the ciliary nerve from apical irritation,

brittleness of the hair, variable and uncertain appetite, fluctuations in body weight, quick fatigue, subnormal morning temperatures slowly reached by the thermometer, chest pains, frequent clearing of the throat, and husky expiratory cough; there may be a bluish tinge to the lips or an unusual redness of the gum margins. Careful inspection may reveal deficient expansion of one or the other apex, and there is sometimes also a fine laryngeal crepitus to be heard by placing the ear near the open mouth of the patient. Sooner or later a slight hemorrhage or a prolonged "cold" will startle the patient and be what he, and too often his physician, considers the starting point of tuberculosis.

**The Behavior of Eosinophile Leucocytes in Cases of Pulmonary Tuberculosis.** — Swan and Karsner (*New York Medical Journal*, March 25). Dr. Swan, after numerous experiments, has reached the conclusion that the absence of eosinophile cells from the blood in tubercular patients may be looked upon as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested. Experiments have demonstrated that in fatal cases of pulmonary tuberculosis the eosinophile cells were below 1 per cent., at periods varying from 100 days before death to the day of death. He cites the following instance: The eosinophile cells 130 days before death form 2 per cent. of the leucocytes in the peripheral blood; 122 days before death they formed 1.4 per cent.; 26 days before death they were absent; 14 days before death they formed 2.4 per cent.; and 7 days before death they formed 1 per cent. of the circulating leucocytes. Another case is recorded in which the patient recovered from tuberculosis. Thirty-seven days before discharge there were no eosinophiles found in the circulating blood. Two days later there were 4 per cent.; five days later there were 2.8 per cent.; eight days later there were 2.6 per cent.; seven days later there were 3.6 per cent.; and on the day of discharge, fourteen days later, there were 4.2 per cent. of eosinophile cells in the peripheral blood.

In tuberculosis of lungs or other tissues and absence of eosinophile cells of the blood is often observed, and this fact has been of considerable value in the differential diagnosis between this and other conditions in which normal or increased numbers of these cells are present; yet when tuberculosis is accompanied by cachexia or irregular separation eosinophile cells may re-

appear in moderate numbers. It is believed that when these cells persist in tuberculosis the outcome is usually favorable, since gouty subjects are comparatively resistant to this infection.

As a result of experiments, it may be concluded that in cases of pulmonary tuberculosis the eosinophile cells tend to disappear from the circulating blood, as the progress of the disease brings a fatal termination nearer and that, as the patient improves under treatment and as the disease shows the tendency to become arrested, the eosinophile cells reappear in the circulating blood. It appears that this tendency of the eosinophile cells up or down may be of use as a prognostic sign, and that the fluctuation of the eosinophile cells is a measure of the severity of the secondary infection of pyogenic organisms and not an indication of the extent of the tubercular process itself. The reappearance of the eosinophile cells in the circulating blood coincident with the improvement of a case of phthisis is probably due to the removal of the chemotactic influence of the products of the growth of the pus organisms and the reassertion of the influence of the tubercular manufacture in the tuberculous lesions.

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## BOOK REVIEWS.

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THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume II. General Surgery. Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in Rush Medical College (in affiliation with the University of Chicago). Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

The opening sentence of the introduction states concisely the method pursued in the completion of the Series. It reads as follows: "The plan of reproducing articles extensively from acknowledged authorities and general in their scope has been followed in this volume to a still greater extent than in the preceding ones." Edited by John B. Murphy, of Rush Medical College. This should alone bespeak a favorable reading.

The surgery of the peritoneum and mesentary, the stomach, intestinal surgery, general and diseased conditions, the appendix, the gall bladder and ducts—these are the articlee of most interest, most stressed.

Some good points, good or old ones emphasized, are made under "Anesthesia." For example: "To keep a patient wasted by disease under an anesthesia for a prolonged period during

gastrointestinal operations is dangerous; hence *discontinuous anesthesia* is to be recommended." The perennial discussion as to the relative merits of chloroform and ether still keeps up. Mixed anesthesia scopolamin, morphine, stovaine, and the new inhalers are all reviewed as to advances during the past year.

Among the instruments mentioned are Barnesby's needle-holder, Hartzka's three-sided forceps, and Marshand's skull saw. Under operative technique the value of blood examinations is insisted upon.

Beard's contributions on malignant tumors is considered with hopeful tendencies in the work of others in this field. Gastroenterostomy for the year is well epitomized in a review of 500 cases by W. J. Mayo, and in the collective method of investigation resorted to by W. H. Wathen. The latter sent twelve questions to five American and five European surgeons. The answers are given in the order received.

Under gall bladder and ducts, diagnosis of cholelithiasis is discussed by W. J. and C. H. Mayo, based on clinical of 1,100 operative cases. For a summary of results and advances in general surgery for the year, undoubtedly this is the most useful and complete single publication.

B. L. J.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume X. Skin and Veneral Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M. D.; Hugh T. Patrick, M. D.; William Healy, A. B., M. D. Series 1906. Chicago: The Year Book Publishers, 40 Dearborn Street.

The greater portion of the volume is devoted to nervous and mental diseases. Under skin and venereal diseases syphilis, as usual, receives much attention. In this edition treatment and therapy of this affliction is well considered; a number of useful formulæ are given. X-ray treatment of ring-worm of the scalp receives a favorable review.

The article on "Mortality after Prostatectomy" offers much material for careful consideration. Under nervous diseases, many subjects of interest are submitted; as, new lights on the theory, a new classification of sensation, and new matter on the reflexes.

REFERENCE HANDBOOK OF THE DISEASES OF CHILDREN.—By Prof. Dr. Ferdinand Fruehwald, of the Vienna Polyclinic. Edited, with additions, by Thompson L. Westcott, M. D., Associate in Diseases of Children, University of Pennsylvania. Pp. 533, with 176 illustrations. Philadelphia and London: W. B. Saunders & Co., 1906. Price \$4.50.

This book is product of the experience of a great clinician,

whose opportunities have been unlimited and whose ability is unquestioned, and is within limits a valuable work; still one wishes the author had gone into such an important branch at greater length and had classified it after the manner usually followed in such works. The grouping of the subject matter alphabetically precludes the possibility of recommending the work to students and limits its field to being a mere reference manual. Even then important subject matter is given with such painful brevity as to detract from what would otherwise have been an excellent work.

Some of the conditions—notably “rheumatism” and “infant feeding”—could be improved upon considerably by a fuller consideration and one which would give the more advanced views.

We regret to see the term “scrofulosis,” which has been relegated by authors and teachers generally to pre-bacterial days and has no place in modern nomenclature.

The paper, binding, etc., bears all the marks of a standard establishment.

CLINICAL METHODS.—A Guide to the Practical Study of Medicine. By Robert Hutchison, M. D., F. R. C. P., Assistant Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond street, and Harry Ramy, M. A., F. R. C. P., Ed., F. R. S. E., Examiner in Medicine and Clinical Medicine, Royal Infirmary, Edinburgh. With upwards of 150 illustrations and 9 colored plates. Ninth edition, seventeenth thousand. Chicago: W. T. Keener & Co., 1905.

A copy of “Clinical Methods,” by Dr. Rainy, of St. Andrew’s University, and Dr. Hutchison, of London Hospital, appears for review. The work appeared first in 1897, was revised in 1902, and the present volume appears as its third edition.

The title describes its intent and purpose. It is not intended to supplant current works on diagnosis, but rather to support them by detailed description of the technique employed in its practice. A special chapter deals with the clinical examination of children. Another gives a comprehensive and detailed account of the physical, chemical, and microscopic examination of the urine.

The determination of cellular and hemaglobin contents and investigation of abnormal conditions of the blood is freely treated.

Pathological fluids receive consideration. A chapter is devoted to the technique of the detection of the more important pathogenic bacteria, which is brief and needs the support of larger works. The work is well written and lucid, and the de-



scription of the application of clinical methods is comprehensive and detailed.

Altogether it should find favor with the senior student, who will find the minutiae of practical diagnostic methods lucidly described; with the young physician, who will appreciate the clear description and practical, systematized methods; and, further, with the older practitioner, who may be refreshed on the latest methods and be reminded of the width and importance of the field and perhaps find new and valuable methods of diagnosis ably defined.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS.—With Especial Reference to the Application of Remedial Measures to Disease and Their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., B. Sc. Eleventh edition, enlarged and thoroughly revised to accord with the eighth dicennial revision of the U. S. Pharmacopœia, 1905. In one octavo volume of 910 pages, with 113 engravings and four colored plates. Lea Brothers & Co., Philadelphia and New York, 1905. Price \$4.00.

The proper preparation of foods for the sick is a matter of much interest to the attending physician, as so much depends on the proper dietetic management of many cases. The proper feeding of the sick is not only an art, but also a chemical science, and should no longer be left to haphazard methods. We know of no work on the subject that gives us more pleasure in recommending than "Practical Dietetics," edited by Alida Frances Pattee. It is a little book that should be on the desk of every physician and in the equipment of every trained nurse. It deals with the whole subject of the preparation of food for the sick in a very thorough and practical manner. The chapter alone on the various preparations of milk is worth much more than the price of the book.

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#### THE NECESSITY FOR HEMATICS AFTER MIS-CARRIAGES.

The more one studies the pathological conditions which follow premature expulsion of a fetus, the more evident it becomes that changes and complications which result from such unnatural termination of a natural process, are little appreciated. There can be little wonder, therefore, that abortions and miscarriages so often give rise to countless female ills, and so frequently lead to lives of more or less chronic invalidism.

Take, for instance, the average case. The whole female organism, as soon as conception takes place, makes preparations to meet the growing demands of the impregnated ovum. The

vital processes of both nutrition and elimination are more heavily taxed, and this of course, means greater activity on the part of the nervous and circulatory systems. Under normal conditions, however, since the female organism is especially designed for the one great purpose, maternity, there is only a modification or increase of function throughout the body. Thus in every sense, in spite of its many complex details, normal pregnancy is purely physiological.

But if for any reason pregnancy is abruptly terminated before the time at which it would normally end, the condition becomes distinctly pathological. Delicate structures, especially those of the generative organs, are suddenly arrested while in a stage of active development, and a retrograde process has to be prematurely established. There naturally follows a marked depression of the whole nervous system, because of its unprepared state for meeting an event unexpected and unnatural. More important than all, however, is the fact that certain growing tissues that would separate normally at the end of pregnancy, in early stages are so closely attached to the uterine wall, that premature delivery always means tearing them away, leaving ragged, lacerated surface and an inevitable retention of tissue that because it has no further purpose must be either thrown off or absorbed by the organism. The extreme liability to infection at this time is well-known, and is directly due to the predisposition which attends this invariable presence of dead or dying tissues.

From the foregoing, it must be apparent, that the effect of every miscarriage is depressing in character. Every organ cannot fail to feel the pernicious imprint, and there is a logical falling off of every vital process. Because of the formation and absorption of ptomaines and toxins of varying degrees of virulence, there is always more or less vitiation of the blood and disintegration of its corpuscular elements. While the hemolysis may not be extreme, it is generally sufficiently marked to leave no doubt that it is a prominent factor in determining the duration of convalescence and the completeness of recovery.

In regard to treatment it seems hardly necessary to speak of the importance of thorough antisepsis nor of the frequent necessity of removing decaying material. These things are well appreciated by physicians generally. But what should be emphasized is the great importance of vigorous reconstructive treatment after miscarriages, in order to hasten the restoration of normal conditions, with all that this may mean on a woman's whole future health.

Clinical experience has shown that Pepto-Mangan (Gude) has an especial value in these cases, for it not only supplies the urgent needs of the blood, but directly promotes the elimination of ptomaines through the natural channels. The phagocytic process is stimulated, and as a supply of good active blood is produced, the uterus and related organs are vastly helped in their effort to return to normal conditions. Digestion and assimilation are aided and the general vitality reinforced to a marked degree.

In a word, Pepto-Mangan (Gude) is an unsurpassed tonic wherever there is a lowering of blood quality, from no matter what cause, and the definite positive benefits which follow its administration leave no further recommendation necessary.

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### INSOMNIA.

Insomnia may be the result of innumerable causes. Every physician realizes that a patient must sleep soundly to produce the rest demanded by the bodily organs, and refresh the brain before he can recover. Morphine and the bromides are unsatisfactory, because when their influence wanes, the consequent nervousness demands a renewal of the dose, and often results in a drug habit. In such cases Daniel's Conct. Tinct. *Passiflora Incarnata* has given the greatest satisfaction. Being produced from the May-pop, which is both sedative and antispasmodic, it appeals directly to the nervous system, reduces any tension that may exist, and soothes to a normal condition. *Passiflora* cures insomnia, whether from Melancholia, from Uterine Sources, from Cerebral Congestion, from High Arterial Tension, or from Hysteria, Convulsions, Worry, Sorrow or Fear. *Passiflora* is Nature's remedy—a true nervine—and instead of the dreaded after effects of opium, leaves the patient in a quiet and healthful state.

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From treating a great many patients with diabetes mellitus with Papine I have the experience that I have yet to see a patient that could not stop taking the Papine at any time I so direct him. It does not seem to cause the least desire for its continuance or to create the least disposition to the formation of a drug habit. This has proven itself to me on several occasions when I have had occasions to administer the drug for six or more consecutive months, and the patient to be able to stop at the end of that time with no bad effects or symptoms, which would surely have oc-

THE  
American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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HERNIA.\*

BY IRVIN ABELL, M. D.,

LOUISVILLE, KY.

IN selecting hernia as a topic for discussion this evening the writer realizes that he is presenting a subject as old as the history of surgery, and in the operative treatment of which, all here to-night will agree. Upon the indications for treatment, mechanical and operative, there should be no discussion, but the continued observation of cases presenting at a more or less inopportune time for operation, and in which faulty mechanical treatment has been employed, induces the writer to present the subject briefly for your discussion, limiting his consideration to the indications for treatment, and treatment of the most common forms, namely, inguinal, femoral, umbilical, and ventral, excluding the post operative type. From a practical standpoint we may divide hernia into those that are reducible, irreducible, obstructed, inflamed, and strangulated.

In the treatment of the reducible varieties, the age, occupation and condition of the patient will determine our selection of the method to be employed. In children of both sexes inguinal hernia is usually of the congenital type, regardless of whether the protusion makes

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\* Read before the Louisville Clinical Society, January 8, 1907.

its appearance in infancy or in early adolescence. The application of a properly made, well fitting truss and the avoidance of strain, particularly that associated with constipation and phimosis, conditions so frequently noted in children, the subject of hernia will frequently effect a symptomatic cure. The writer prefers a double spring truss, the pad or pads made of hard wood, the springs of light steel, all covered with hard rubber; the steel springs present the advantage of allowing the regulation of pressure, and the hard rubber covering permits the truss being kept clean. The hard pads are the source of some discomfort when first applied, but by regulating the pressure, bathing the skin with alcohol and dusting it freely and frequently with some drying powder, such as talcum or stearate of zinc, it rapidly becomes accustomed to the pressure of the truss and ceases to give annoyance. In those cases in which we expect the truss to effect a cure it should be applied in the recumbent posture and worn at all times when in the erect or sitting position. In adults or older children it may be left off at night unless they suffer from a cough or other condition tending to increase intra-abdominal pressure; in infants the truss should be worn day and night. During the period of infancy it is difficult in all cases, and impossible in many, to satisfactorily maintain a truss in its proper position. The writer has been best satisfied in such cases by the above described truss, reinforced by two perineal bands, one on each side. It is advisable to have the child wear the truss until the age of five or six years, when, if the hernia still persists, it is deemed best to subject the patient to the operation for radical cure. Hernia operations in children younger than this are to be avoided, since the unrest and the soiling of the dressings with urine militate against securing firm union. In older children the truss may be worn for one year, when, if the hernia still persists, resort may be had to operation.

Femoral hernia is rarely observed in childhood, being most frequent in females after the period of complete development. When observed, a single spring truss made of



same materials suggested for the inguinal truss, will, in many instances, succeed in maintaining reduction of sac contents, but very rarely will it affect a cure. Trusses in this variety of hernia are not well borne, and viewing the discomfort, the insecurity of the retention and the extreme rareness of cure, operation is preferable in all cases, unless some distinct contraindication exists.

Umbilical hernia is frequently observed in infancy, and in practically all cases is curable by relieving the abdominal wall of strain at this point; this is best accomplished by straps of adhesive plaster with or without a pad at site of hernia; the pad may be of cork or wood applied directly over hernial orifice and held in place by a two-inch strap of adhesive plaster applied transversely, extending on each side nearly to vertebral spines. In cases in which the hernial orifice is small the pad may be omitted, simply folding the wall in at the hernial site and maintaining it in this position with the plaster.

Ventral hernia is rarely seen in infants except at the umbilicus, occasionally being observed in the epigastrium, when as a rule, it is small, contains omentum, and gives but little trouble; the adhesive strap affords satisfactory treatment.

Reducible hernia of either of the four types, inguinal, femoral, umbilical, or ventral, occurring in adult life, are, in the absence of contraindications, best treated by operation. Three weeks in bed, with practically little or no exposure to danger, and in the absence of infection, the assurance of a good result is far preferable to the danger of strangulation of the discomfort and trouble of wearing a truss regardless of how well it may fit. In the inguinal type, provided the occupation of the patient is not a laborious one, and the hernia is recent, a cure may often be obtained by the truss treatment as outlined above. Such, however, cannot be said of the umbilical, femoral, and ventral hernia; these, with old inguinal hernia, are afforded speedy and safe cure by the various operations employed, while the best that we can hope to accomplish by the mechanical treatment is the maintenance of reten-

tion and the consequent prevention of their becoming adherent and irreducible. Contraindications to operation are found in the extreme of age, the presence of any general condition or ailment which would render a surgical procedure hazardous, and congenitally weak or deficient walls at hernial site, preventing a firm closure by suture. The prognosis as to permanence of cure after operation for very large hernia of long duration of either type is not so good, for two reasons; first, the contents of the sac having remained for a long time outside of the abdomen greatly increase intra-abdominal pressure when returned, thereby making undue tension upon sutures; and second, the size and pressure of sac and contents cause an atrophy of structures at and around ring and canal that seriously interferes with proper and firm closure. The long continued wearing of a truss will cause the same atrophy, increasing the size of ring and canal, thereby endangering the permanency of cure after operation. With proper technique in ordinary cases of inguinal and femoral hernia, not more than one per cent of relapses should occur, while the percentage of recurrences in the umbilical and ventral hernia is slightly larger.

A hernia is said to be irreducible when the contents of the sac are adherent to each other or to sac wall, preventing its reduction. In the majority of irreducible hernia the omentum is the adherent part, and under such circumstances becomes hard and infiltrated, losing its soft and pliable character. The wearing of a truss with such a condition present is contraindicated, and the subject of such a hernia, if otherwise healthy, should be subjected to operation. Should the patient be excessively fat, and they usually are with the umbilical type, it is advisable to first place them upon treatment looking to a reduction of the fatty tissue before operating, endeavoring in this way to make more room in the cavity for the viscera that are to be returned, thereby relieving the wound of as much tension as possible; this aim is further advanced by amputating and removing the adherent omentum in the sac at the time of operation.

In incarcerated or obstructed hernia the onward flow of the feces is impeded without interference with the circulation in the gut wall, leading to colicky pain and distention. This is usually observed in the umbilical variety and the colon is the portion of gut involved; gases usually pass and the lower bowel may be moved by enema. Treatment should consist of rest in bed, massage, but not taxis of the protrusion, an ice bag to sac, copious enemata, and a brisk purgative. These measures failing, resort should be had to operation.

An inflamed hernia is characterized by a localized peritonitis involving the sac or its contents due to injury, usually misapplied efforts at taxis or the pressure of an ill-fitting truss. The symptoms are those of a hernia plus a local inflammation. In the treatment of such cases much depends on the judgment of the attendant, the milder cases recovering under rest, restriction of diet, enemata, and the application of hot or cold fomentations as the stage of the process indicates. Operation under such circumstances is best undertaken only as a life saving measure, since the inflammatory condition offers a serious impediment to firm union; with a progressive inflammation, however, resulting in an increase of sac contents and a consequent strangulation, our only hope is in operation.

A hernia of any type may become strangulated, obstructing not only the fecal stream but the circulation of the gut as well, leading rapidly to gangrene of the involved segment. Small hernias more frequently become strangulated than large ones, and gangrene is seen oftener in the femoral and umbilical varieties than in the inguinal and ventral. The cause of the strangulation is usually sudden effort, forcing more of the abdominal contents into the sac than it can accommodate. The increased pressure at the point of strangulation interferes with the venous return causing a marked congestion; the fluid portion of the blood exudes into intestinal wall, intestinal lumen, and sac cavity; as the tension becomes more and more marked, arterial circulation comes to a standstill and gangrene ensues. This process ordinarily requires from 24 to 72

hours for its completion, although when the obstruction is acute gangrene may occur much earlier. The symptoms presented are those of intestinal obstruction plus a hard, painful tumor at one of the hernial sites, devoid of impulse on coughing. The acuteness on onset, the completeness of the obstruction, the severity of symptoms, and the absence of impulse on coughing will serve to distinguish it from the other varieties of irreducible hernia. The amount of gut involved bears no definite relation to the intensity of symptoms; in all cases presenting evidences of intestinal obstruction the hernial sites should be carefully examined; femoral hernia are usually small and their character is oftentimes completely misunderstood by their possessor. The writer has on two occasions found strangulated femoral hernia in patients who had given no history of hernia to their medical attendant, although both admitted having noted the presence of a small "lump," the significance of which they did not understand. In one of these cases the tumor was very small, not larger than a marble, and proved to be what is known as a Richter's hernia, one in which a portion of the bowel was caught in the constricting ring. In such a case, obstruction to the fecal stream is not always complete, both feces and gas passing if the loop of the intestine be the ileum or higher. When a hernia becomes strangulated its immediate reduction is imperative if we wish to avoid the early and late dangers associated with it, the early dangers being obstruction, gangrene, and peritonitis, while the latter ones embrace the subsequent changes in the gut wall due to the injury sustained at the time of strangulation; these are ulceration, perforation through a necrotic area, usually at sight of constriction ring, and stenosis due to contraction of scar at site of injury. Reduction may sometimes be accomplished by taxis, always by operation. To employ taxis in any of the varieties of hernia mentioned, the patient should lie on back, with pillow under hips and knees flexed in order to relax the abdominal muscles and fascia. The neck of the sac should be grasped in the left hand and manipulated while pressure is made on fundus

with right hand, the direction of the pressure varying with the site of the hernia; in umbilical and ventral hernia, the pressure should be backward; in inguinal, backward, upward, and outward, and then directly backward as the sac contents enter the inguinal ring; in femoral, downward and backward, and then upward as the contents enter the canal. Taxis should always be gentle, never forcible, and should be employed not longer than five, or at the outside, ten minutes. It is best not to employ it in hernia which, previous to strangulation, were irreducible, and should never be employed in the presence of symptoms indicating inflammation, gangrene, or peritonitis, or when the hernia has been strangulated for twenty-four hours or more. Forcible taxis cannot be too strongly condemned; it is granted that in many instances it has been successful and yet on the other side are the long series of accidents that have attended its use. These are, rupture of the bowel or sac; sufficient contusion of the sac or contents to invite subsequent peritonitis, with or without the accomplishment of reduction, in the first instance leading to inflammation of sac or contents; in the second, to peritonitis from perforation at site of injury or ulceration, or a late stenosis; and lastly, to reduction en bloc or en masse, in which, the hernia, sac and all, is forced into the abdominal cavity. In such instances the tumor disappears but the symptoms continue; in all such cases where, after apparently successful reduction symptoms continue, an operation should be made at site formerly occupied by the hernia and the condition of ring and intestine carefully examined; only by this can the lives of such patients be saved. If moderate taxis fails in reducing a strangulated hernia, it should be subjected to operation early, with a view not only to saving the patient's life, but of securing a radical cure of the defect as well. In order to successfully accomplish this latter aim, it is necessary that the operation be undertaken before such changes occur in sac or its contents as will interfere with closure of wound, or as will necessitate more or less extensive operations on the intestines. In cases with marked inflammation in the sac or its contents



we are forced to employ drainage to such an extent as to invite subsequent recurrence, while those with seriously damaged intestine force us to do a resection or else make an artificial anus, with repair later when the patient's condition permits, in both instances subjecting the patient to grave dangers easily avoided by timely operation.

Time will not permit of a detailed consideration of the operations best suited for radical cure of the varieties of hernia mentioned in this paper. In the inguinal variety the writer always employ the Bassini method, believing it to give the greatest security and comfort, except where time is an object or where the transplantation of the cord would seem to endanger the blood supply of the testicle, when the method suggested by Ferguson is employed.

In the femoral variety the canal is closed by the Bassini method, in addition to which, a purse string closure of the fascia lata as advocated by Coley, is made.

In the umbilical and ventral hernia, a transverse incision with overlapping of the aponeurosis as suggested by Mayo and Noble is done. Chronic gut or kangaroo tendon is used throughout for suture material.

#### DISCUSSION.

DR. MORRIS: I do not want to open the discussion. I think the paper is a very good one and a very instructive one. My personal opinion is that all cases of hernia, suitable for operation, should be referred to the surgeon for operation; I do not care much whether it is an infant, child or adult. I believe we get better results from operation than from the other methods of treatment in most any case suitable for operation, and I do not except even the infants, because it is a difficult thing indeed to adjust a truss to an infant and keep it there. My experience has been that it takes a long time at any age to cure a hernia, in children especially, and I believe they should be operated on.

As to the kind of pads to be used in a truss, I do not believe the hard pads should be used in most cases. The soft pad will secure the hernia as a rule as effectively as the hard one and it is more pleasant to the patient. I think the soft pad is the one in most cases to be used. I say that because personally I have experienced it and I know that it is more pleasant to the patient.

There are many persons who cannot use the hard pad. I have seen a number of persons who would not wear a pad because of the hard pad. If you will give them a soft pad they will wear them without discomfort.

I think these patients should be operated on always when it can be done.

DR. W. H. WATHEN: Dr. Abell has given us an interesting and practical paper and called our attention to nearly all forms of hernia with which we may meet, and has presented in a general way the correct treatment for these cases.

When a child is old enough to be operated upon and protect the wound from soiling, the truss should be discontinued and an operation performed. In all stages of life unless there is some positive contraindication after this age, unless the patient is extremely old, an operation is indicated. Now, if you can devise means by which you can protect the wound by some form of dressing against any soiling, no child is too young to be operated upon. A truss should never be used where an operation can be performed excluding the cases I have mentioned. It is more dangerous than the operation because in timely operations where there is no strangulation or complication nearly every hernia will get well. There is practically no mortality and they remain well.

The great difficulty at the present time in grasping a correct idea of hernia is in the immensity of the literature upon the subject and the great nonsense that has been written upon this subject. You can write in a few pages upon the various forms of hernia a more useful paper than is often written on fifty pages and one that will do more good to humanity. Now, take the question of femoral hernia; it is remarkable how many operations have been suggested for the cure of this form of hernia. It has now been conclusively shown where there is no strangulation and where there is no disturbance of the normal form of the circular opening in this form, that if we will simply remove the sac high up above the ring, dissect away all of the fat and suture the skin, they will all get well and will remain well. Ochsner has conclusively demonstrated that in his operations for fifteen years by this method every case that he has been able to follow has gotten well and there has been no return.

It is a fact that in all circular openings in a cavity where there is not a lining of peritoneum or mucous membrane, the tendency is always to contract and close. Remove this periton-

eum here high up, and dissect your fat away and they all close and remain closed. The same is true in umbilical hernia in children without an operation where there is a circular opening and the peritoneum is not protruding, it will gradually contract and close. Therefore, we have many cases of spontaneous cure of umbilical hernia in children. In older people we do not have it. Umbilical hernia is a form, that in very fat people, until a few years ago was inoperable. Now there is hardly a case that is inoperable. I have operated in a number of cases on every condition of umbilical hernia where by the transverse method, taking out a broad mass of tissue, opening the fascia, separating the adhesions, removing all the superabundance of omentum, then overlapping the fascia and closing the wound, got well and have remained well. I remember a case with Dr. Griffiths three or four years ago of a woman who, before this method was devised, was inoperable. She had no untoward symptom following the operation and is well to-day. I had another case that was practically inoperable and that woman is well. In fact to-day nearly every case of umbilical hernia is considered operable and they get well.

Inguinal hernia is one of the simplest of all to operate on where there are no complications. It is especially simple if we follow the method of Bassini. He said more in the few words upon the basic principles of this operation practically than anybody else has said. Therefore, Bassini's method or some modification is the best method. The union of the fascia is always firm. You can either transplant the cord or make no transplantation and the results will probably be equally good by either method.

DR. J. R. WATHEN: I think Dr. Abell has presented one of the best and most complete papers that has been presented to the Society in a long time. He has certainly taken up phases of the subject that are not often discussed by men writing upon hernia—that is the indications and the contraindications for operation and the classification of the different forms of hernia. I am sorry that the time would not allow him to detail the technique of the operations for herniotomy, although at the close of the paper he outlined the technique accepted by the best operators to-day.

In regard to operating upon children it has been claimed that they should not be operated on, and they have been neglected to a certain extent. Coley lately recommends operation and

placing the patient up in plaster-of-paris to prevent soiling of the parts.

I operated two years ago on a patient two months old for strangulated hernia. The result was most perfect. I did not have to resort to the plaster-of-paris dressing. The wounds seem to heal as well if not better than in adults, and in the future I shall advocate early operation in children.

Another point that was discussed by Dr. Abell was the character of the sac and contents and the relation of the intestines to it. The more experience I have in hernia work the more I realize that it is impossible to diagnosticate the contents of the sac, and in many cases the kind of hernia. About two years ago, during my term at the City Hospital, I ran across a case of strangulated hernia and in two months I had seen five strangulated hernias. Three was sent to the Hospital by prominent physicians and all were diagnosed as strangulated inguinal hernia. One was seen by a surgeon who limits his practice to surgery. In every case the hernial mass was above Poupart's ligament, and they were typical inguinal hernias to all appearances. I operated and found the sac turned down. I opened the sac and reduced the hernia and did a typical operation for the relief of femoral hernia. It shows, therefore, that we cannot diagnose even the type of hernia. It is almost impossible to diagnose what is going on in this hernial sac. As for taxis and manipulation I think they are very dangerous. While Dr. Abell did not offer any advice along that line I think that we should emphasize the point that less taxis should be employed. I recently mentioned these cases to Coley and he said that he had a case, not reported, where he made a mistake in diagnosis. He diagnosed inguinal hernia when it was a femoral hernia.

Now, in regard to the particular technique employed in the operation, I think we all agree that the Bassini operation is the best. Recently in a conversation with Halsted he told me that he did the Bassini operation except he left the cord alone and then simply united the other structures above. I think the tendency is in that direction. The only difference is that he still uses the fine silk to unite these structures and he told me that he had never had occasion to regret it.

DR. LEAVELL: Dr. Wathen I think in the discussion of the paper brought out an excellent point, that is the ligation of the sac high up. I think the fact that the sac is not ligated high up is responsible for more recurrences than anything else.

Recently I had the opportunity of seeing Matas, of New Orleans, do a hernia operation, and I also had the pleasure of hearing him in a lecture go extensively into the condition and the methods in vogue at the present time, and give reasons why certain methods should be pursued, and he finally came to the conclusion in his own mind that the simplest procedures were the best. He limits himself entirely to the use of cat-gut. The finest he uses is double 00 in every structure. He says that he pays less attention to the cord as he operates more and more. He does not implant the cord as in the Bassini operation.

Another point in the technique that struck me very forcibly was that he used just as few skin sutures as possible. For the closure of the skin he used strips of adhesive plaster closely applied without the use of a pad over the wound. He claims that he has gotten most excellent results in that way, lessening the chances of infecting the structures, and he does not have to keep the patients in bed so long. He makes it a rule to get the patient out in two weeks. I saw him do two operations for hernia. He uses the finest catgut and he lays particular stress upon ligating the cord high up. I was struck with the almost opposite procedure as advocated in the Mercedes Hospital in Habana. There they stick more closely to the Bassini method and are using silk and silk worm-gut to close the skin.

DR. WILLMOTH: I think Dr. Abell has given us an exceedingly practical paper. There is one point that he dwelt upon and one that I want to speak of, that is, the age of the patient. He said he would not operate on a patient under five. Other things being equal I rather agree with Dr. J. R. Wathen and he quoted Coley, and we all know that Coley is a recognized authority. He does herniotomies on babies and gets excellent results, and he claims that the slight chance of infection that the child is submitted to does not contraindicate operation. The child can be placed in bed and the parts protected by a plaster dressing. To my mind this is preferable to wearing a truss. My experience with the truss in babies is that it is impossible to retain the hernia in position if there is anything like a large opening, because the baby in moving around will move the truss in some way and allow the hernia to get through. I must say that in my own personal experience with babies it is impossible to keep the hernia in position with a truss. With larger children or in those with hernia acquired later it is easier kept in position and the child is easier to control.



The question of employing taxis too long I think is a point that should be emphasized by every surgeon. I have seen a number of hernias that have been damaged—the sac and the contents—by the employment of taxis. I have possibly performed operations on one or two where the sac and contents were damaged beyond repair by manipulation.

There is one thing that I would like for Dr. Abell to refer to in his closing remarks and that is his experience with the transplantation of the cord. A number of operators advise against the transplantation of the cord as originally done by Bassini. I recently read an article by Coley and it was his experience that there were more recurrences in those cases in which the cord had been transplanted than in those cases where the cord was left in its original position.

I thank the essayist again for his exceedingly interesting paper.

DR. FLEXNER: I have enjoyed the paper very much, especially that part of it referring to taxis and so on. It has been my practice not to fool with strangulated hernias not easily reducible.

I think what Dr. Wathen said in regard to writing a paper on hernia is true of any other medical subject. If a man knows what he is talking about he can say it in a few words. Oftentimes many words are used to cover one's ignorance of a subject.

DR. MORRISON: I worked in the hernia room of the Ruptured and Crippled Hospital for some time. There they use a truss for young children with a hard pad, and a hard pad in my experience is better than a soft pad. You have to take care of the skin and for this purpose alcohol and drying powders should be used. After they get used to the hard pad it is a better pad. Up to the age of five years they put a truss on the child and the reports show good results. After that age the children are usually operated on. Up to that time they used a plaster dressing after the operation. When the child was above this age they did not use the plaster dressing so much. It was used in young children and restless children. They would get the patients out of bed in three weeks. I believe that the tendency all along now is to get patients out of bed earlier.

DR. ABELL (*closing*): I, like Dr. Morris, have had some personal experience with a truss, and I like the hard pad much better, having tried both. My reason for preferring the hard pad is that it fits tighter over the ring. Where we want one that

will completely close the inguinal canal and retain the hernia perfectly I do not think any pad will approach the hard wood pad. It is true that they hurt just as Dr. Morris stated when first put on, and the skin should be rubbed with alcohol and dusting powders applied. Once the skin is accustomed to the pressure of the hard pad it will retain the hernia better than anything else.

In regard to a truss for children, as stated, it is impossible to put on a truss that will hold the hernia in place. Dr. Vance suggests the use of an ordinary bandage which, when put on in those cases where we cannot put on a steel truss and in the manner described by him, retains the reduction better than anything I have ever seen. If we can use a steel spring truss, it is the ideal one, for the reason that the hard wood pad brings the peritoneal surfaces in contact and will produce a symptomatic cure. I do not believe that a truss really cures a hernia. It does not repair the muscle. If a truss is worn for a long time it causes an atrophy of the muscles that will militate against firm union.

In regard to taxis mentioned by some of the members in discussing the paper, I suppose I could mention unfortunate results. I have seen two reduced en bloc. In one the man had reduced the hernia himself. He had on no truss. He did not present the symptoms of a hernia. We opened the belly, making the incision in the median line and found the hernia sac and all reduced together.

In regard to the transplantation of the cord, I am glad that that was mentioned, and I believe in a few cases the care of the cord has largely to do with a good result. My results in a few cases in which the cord was not transplanted have not been satisfactory. I have been able to follow four of these cases and they are uncomfortable. The cord going out low down I think has to do with it. We do not get the valve action. This discomfort is not pain but is described as a feeling of insecurity. My idea has been that in transplanting the cord it is dropped low down and in closing up we do away with the obliquity of the canal, and instead of a canal that runs obliquely we make one that runs almost perfectly straight through the wall.

In regard to these various sutures and methods suggested, I think it largely depends upon the character of the hernia we are dealing with. If we have a man with well developed muscles, good tendons and a small hernia, the small suture is all right, but take a case with a hernial protrusion of some size

with a canal in which instead of being able to insert the little finger you can insert three fingers, there can be no doubt in an instance of this kind that the cord should be transplanted to prevent a recurrence and give the patient comfort, and larger suture material should be used.

As to the time the patient should remain in bed that also depends upon the character of the hernia. If the hernial ring is a large one and the hernia has existed for a long time or he has worn a truss, by all means a muscular flap is essential and he ought to have rest in bed for sometime, because when you bring the muscle down to Poupart's ligament it is going to be sometime before the union is firm. Muscle to muscle and tendon to tendon will unite quickly, but it will be sometime before it is secure.

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### PATHOLOGICAL ASPECTS OF GENIUS.\*

BY L. G. PEDIGO, A. M., M. D.,

ROANOKE, VA.

THE notion that there is some affinity between genius and insanity usually has been traced to the authority of Dryden—who said “great wit to madness nearly is allied.” In point of fact, if we examine critically the history of the subject, we discover traces of this theory all along the pathway of letters and philosophy for twenty centuries before that poet was born. We find the observant and remorselessly reasoning Aristotle saying something like this, “men,” illustrious in poetry, politics, and arts, have often been melancholic and mad like Ajax, or misanthropic like Bellerophon. From that early period to the present, it has been a matter of common and uncommon observation that men of great genius are nearer the border land of insanity than men of mediocre talent. Indeed the notion has so fully crystallized into proverb—along with the usual fallacies of proverbs—that, in popular opinion, a person of a low order of intelligence can not well become insane. While to a physician this is obviously untrue and absurd, the fact remains that the temperament known as genius shows in many of its manifes-

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\* President's address before Southwest Virginia Medical Society, Abingdon, Va., January 22, 1907.

tations a near approach to a pathological condition. Historically, the other side of the question has been very feebly and inadequately sustained. Its most distinguished exponent, Charles Lamb, wrote an essay on "The Sanity of True Genius," in which he displayed great ingenuity in evading the main issue. True genius that he was, he contributed something to the refutation of his own arguments by spending some part of his life in an asylum for the insane. Most of his time was devoted to the affectionate care of his sister, who was a subject of epileptic or recurrent insanity. His father showed traces of the same family heritage. The cardinal error into which Lamb in common with others fell, is found in their failure to discriminate between actual insanity and the insane temperament.

The contention is not that geniuses are insane, but that almost without exception they manifest a strong predisposition to insanity. This proposition is to-day based on fairly well wrought out scientific principles and is attested by a very wide and interesting collocation of facts. Let us first examine the principles underlying our theme and endeavor to construct a theory.

Genius has been pretty clearly defined as a capacity for original work of a high order. As a foundation for a theory of the *modus operandi* of genius, let us examine the conditions, psychical and physical, which favor original work, and which promote and exalt strength and skill. The prevalent opinion that the exercise of *will power* is the one great prerequisite is probably as far from the truth as we could guess in a life time. If modern psychical research has developed any one thing worthy of preservation in the accumulated store of knowledge it is this,—that human activity, mental and bodily, may be roughly divided into conscious and subconscious function. The former embraces all those things that we do in the light and under the guidance and incentives of the normal consciousness; the latter consists of a great aggregate of action accomplished in an automatic way without intervention of the conscious will. Thus we have the conscious and the unconscious man. When we recall that a critical study by

Prof. Myers, of London, on the "Nature of the Subliminal Consciousness" covers a hundred and fifty closely printed pages, it will be readily understood that, fundamental and important as it is, I can only touch briefly upon this extensive subject here. I do wish to emphasize and elaborate one postulate, viz: That of the two modes—subconscious work is always and everywhere superior in all essential respects to that accomplished under the normal volition. Take a few illustrations—breathing is a striking instance. We breathe automatically and subconsciously. Think for a moment of the extensive and complex nervous and muscular work involved in this apparently simple act, then try the experiment of taking its details under the control of the conscious will. Breathe voluntarily and at the end of a minute you are weary of the task. But by the subconscious method you breathe sixteen times a minute, twenty-four hours a day, sleeping or waking, seventy-five or a hundred years (let us hope) with not the semblance of fatigue, unless the machinery is damaged or some obstacle is thrown in the way. So, too, with automatic walking on a smooth road as compared with walking on cross-ties at unequal distances, where every step is a separate act of the will. Consider an epileptic convulsion, in which the vast expenditure of nervous and muscular energy could not be accomplished by direct volition at all, and yet the patient rallies and is capable of his usual vocation between attacks. Take the truly remarkable performances for show purposes—by such persons as Mrs. Abbott, the so called "magnetic woman" of a few years ago. I have seen eighteen strong athletic men exhausted by struggling against her in a varied stage performance of two hours duration, and this small woman at the end showed no evidence of fatigue. Any one who has experimented extensively with the artificially induced somnambulism of Charcot and Bernheim has observed that this trance-state enhances the skill, strength and endurance of the subject in a marvellous degree, and exalts the acuteness and delicacy of all his sense-perceptions. A curious illustration of the superiority of the subconscious mental processes is found



in the absolutely accurate estimate of the flight of time by some subjects in this condition as well as by others in natural sleep. It is a fact, widely exemplified in history, that many men can solve more difficult problems, make more intricate calculations and do a higher order of art work in their dreams and in somnambulism than in their waking hours. Sir Isaac Newton testifies to this in his own case.

In the world of art, it is well known that the greatest musicians for example must suspend the exercise of the will, turn themselves loose and "lose themselves" in their music to do their best work. I am persuaded that this is not a mere affectation or pretense on the part of the artist, but that it has a solid psychical foundation.

A thorough examination of this aspect of our question will establish the fact that in the accomplishment of results the subconscious man is greatest, that, so far from every achievement being attributable to the direct exercise of conscious will power, the interference by that faculty in our highest endeavors weakens us, diminishes our powers of endurance, renders us unskillful, physically and mentally, and causes us to muddle through a piece of work which otherwise we would do with consummate skill. It is not merely that we have exaggerated the importance of the human will that, under the teachings of the various schools of metaphysics we have placed it on a pedestal and worshipped it, but that in a large measure we have misunderstood its essential office. The conscious will should be treated, not as a minute guide, not even chiefly as a propelling power, but as a restraining, controlling influence—as the aggregate of the power of *inhibition*.

Viewed in this light then we have to consider in every man a dual personality. A genius is a man with a strong subconscious mind and with a temperament that easily lapses into the subconscious state. If the will is strong enough to hold this powerful machine on the track and herein consists its real importance, the life is one of creative genius. If by dissipation, by overwork, by emotional strain, by unwholesome living, or by whatever pernicious

environment or influence, the powers of self control are weakened beyond a certain point, then the organism drifts into the incoherency of insanity. This theory of the *modus operandi* of the inspired mind suggested itself to me in the course of some experiments in thought transference. The subject—a man of highly refined nervous organization—was in the subconscious state known as induced somnambulism. I was impressed with his wonderfully exalted sensibilities, his powers of perception, his faculty of receiving impressions and information of highly complex nature through other channels than the ordinarily recognized senses. I recalled the eloquent words of Dr. Newell Dwight Hillis—when in splendid hyperbole—speaking of the intellectual genius of The Christ, he said “sensitiveness is greatness.” It is greatness when the impressionable organism is under the inhibitory restraint and control of a strong health will power, and herein I repeat consists the really inestimable value of that much misunderstood function. Given a subconscious mind too strong or a will relatively too weak and sensitiveness is not greatness but insanity. And here is found the narrow dividing line.

The theory that genius is a pathological *status* is immensely strengthened by a critical study of the *stigmata* of degeneration in great men, such as short stature, pallor, emaciation, rickets—resulting in various deformities—general weakness and sickliness in childhood, various irregularities of physiognomy, sessile or otherwise badly formed ears and abnormal shape of skull, stammering, left handedness, sterility, etc. The cretin like physiognomy of such commanding geniuses as Socrates, Rembrandt, Pope, Carlyle and Darwin would be a fair illustration. Of course, it is conceded that one or two *stigmata* will not prove a case. But the preponderance of evidence is in favor of the close relation of genius to degeneration. If this point needed reinforcement, we would find it abundantly, and to spare in another aspect of the question, namely, neurotic heredity. It is well known to medical men that neuroses and organic nervous maladies of a certain group are interchangeable by heredity. This group includes epilepsy,

hysteria, chorea, deaf mutism, dipsomania, idiocy and insanity, especially insanity of the periodic or recurrent type. That is to say a father or mother may have any one of these affections, and the child or grandchild may inherit it in any of the other forms.

Years ago Henry Mandsley proved beyond controversy that the same families that produce a case of epilepsy or idiocy or dipsomania, or these and various kindred conditions in different generations, are likely once in a great while to bring forth a genius. Thus it is believed by those who have studied statistics of heredity most closely, that genius is a neurosis and is interchangeable by heredity with this whole group. In this connection the tendency to sterility and extinction of the line is exceedingly interesting and significant. Some one has observed that the line of nearly all the great English poets became extinct. I have counted some fifty-four names of eminent men of genius in England, France, Italy and Germany who might be included in the same category.

The particular types of insanity to which genius stands most closely related are the epileptic type and the clinical group, known under Clouston's teachings as "states of defective inhibition." Indeed Lombroso has gone so far as to take the ground that genius is essentially an epileptiform neurosis. While this may not be literally true, it is interesting to note the close analogy. The cases of dual personality, so frequently reported since Charcot's researches on the subject, are states of subconscious cerebration, and while the victim of the attack may travel, may handle money and transact business correctly, and to the observation of strangers may seem a perfectly normal man, yet he is a totally changed character, and when he suddenly returns to his normal consciousness, the time he has lived in the second personality is a blank in his memory. This strange condition by a sort of latitudinous construction has been included in the category of *mental epilepsy*. Until we find out just precisely what epilepsy is this is about as good a classification as any. The interesting point, however, is the close analogy between this con-

dition and the proverbial absent-mindedness of genius, and the likeness unto its periods or paroxysms of "inspiration."

In taking up the historic facts corroborative of the main contention in this paper, we should note incidentally the great prevalence of epilepsy among men of genius.

Julius Cæsar was an epileptic and a dipsomaniac. The sudden periods of weakness which earned for him the contempt of the "lean and hungry Cassius" were epileptoid in their nature. Attacks of vertigo sometimes interfering seriously with his work in the field of battle, his failure to rise and receive the Roman senators on one occasion when taken in connection with his explanations, make out a clear case. Mahomet was undoubtedly epileptic, showing physical and mental features of the malady, and in battle was a raging lunatic. Peter the Great had epileptic convulsions, and could be thrown into an epileptiform seizure by the sight of certain colors.

Among other great epileptics may be mentioned Cardinal Richelieu, Napoleon the First, Petrarch, Dean Swift, Chas. V. Flaubert the great French novelist, Paganini (who was also cataleptic), Mozart, Schiller, Handel, Moliere, Pascal and the Apostle Paul. Samuel Johnson, Chateaubriand and Thomas Campbell were subject to lesser attacks of convulsive movements that were probably choreic in their nature. The great Richelieu imagined in one seizure that he was a horse, neighed and jumped and afterwards remembered nothing of what had happened. Napoleon once pointed out a star to an intimate friend and confided to him that that star guided him in all his undertakings. There is abundant evidence of mental disease in his conduct at Waterloo. Dean Swift once saw a tree dying at the top. "That," said he, "is my fate, blighted at the top"—a prediction which was fulfilled with the terrible precision of inspired prophecy. Whether Martin Luther threw his inkstand at the devil literally or only figuratively by the use of his pen is a mooted point, but we have his own clear evidence that he was subject to hallucinations.

John Ruskin had attacks of ungovernable rage at

times, suggestive of mental epilepsy, and finally spent some years in an asylum.

Victor Hugo was clearly of the insane temperament. Judged by his pictures he had a head and face such as you would expect to meet on the "hurricane deck" of one of our hospitals for the insane. Cowper, Abraham Lincoln, and Edgar Allan Poe were all on the borderland of melancholia. Byron showed evidence of brain defect in his club feet, was subject to periods of melancholia, contemplated suicide and was haunted by a spectre. His mother is described as "a raging irresponsible termagant." His father was known as "Mad Jack Byron," and committed suicide. Brutus, Julius Cæsar, Napoleon, Swedenborg, Shelly, Hobbs, Bunyan, Columbus, Malebranche, Descartes, Samuel Johnson, Goethe and Oliver Cromwell were all subject to hallucinations. Rousseau's insanity is plainly evident in his confessions, to say nothing of the ventricular dropsy of the brain discovered *post mortem*. Sir Isaac Newton had delusions of persecution and afterwards confessed in private correspondence that his mind was diseased.

In reading the autobiography of Herbert Spencer one is impressed with the dominance of brain trouble, whether the symptoms were real or were part of a fixed delusion. Voltaire was a hypochondriac. Socrates presented one of the most interesting studies in dual personality and subconscious conditions in all history in his memorable *daemon*, which he said guided him and inspired him with wisdom. In his physiognomy he showed certain stigmata of degeneration in common with Darwin, including a very short nose, which is so exceptional among intellectual men. Some recently published notes by Darwin's son seem to prove that even the great apostle of evolution was a neuropath. Undoubtedly his family history was unfavorable in this respect.

These are only a few illustrations culled from a great mass of material. They might be easily and indefinitely multiplied if space and time permitted. So far as my researches have gone, I have been so impressed by the overwhelming evidence that I am inclined to share with Lom-



broso the opinion that probably no great genius in the annals of mankind was free from neurotic taint. At one time I had looked upon Plato at least as an exception to the rule—Plato who Emerson characterized as the greatest philosopher that ever trod the face of this planet—Plato who, all wifeless and childless as he was—yet became the progenitor of the intellectual world for all succeeding ages. But a critical reading of some of Aristotle's comments brought the inevitable disenchantment. For years in the same spirit of hero worship I had looked backward and upward to the commanding figure of Shakespeare as exempt from the temperamental infirmities of genius—Shakespeare characterized by Ingersoll as "that intellectual ocean whose waves touched all the shores of thought—Shakespeare, whom the great critic Taine has pronounced "the most creative mind that ever engaged in the exact copy of the details of actual existence, in the dazzling caprice of fancy, in the profound complications of superhuman passion; a natural poetical, immoral, inspired, superior to reason by the sudden revelation of its seer's madness; so extreme in joy and grief, so abrupt of gait, so agitated and impetuous in its transports that this great Elizabethan age alone could have cradled such a child." But when I have examined all the accessible facts and weighed all the available evidence, and when I have read and appropriated Taine's critical and masterly analysis of his temperament, I am not so sure.

Finally, whatever may be our conclusion of the whole issue, it becomes us as votaries of science, whether hero worshippers or not, to discard the denunciatory and uncharitable spirit of Max Nordhau. It is more wholesome and therefore more conducive to truth to assume the analytic, philosophic and sympathetic attitude of his illustrious master Lombroso, bearing in mind that in contemplating the distorted, disproportionate, asymmetrical development of genius we are in presence of the most pathetic aspect of the problem of human evolution, the inexorable tyranny of natural organism.

THE SUBSTITUTION OF HEROIN AND DIONIN  
FOR MORPHINE.\*

BY L. S. OPPENHEIMER, M. D.

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SO far as I am aware comparatively few physicians have had any experience with dionin, or the hypodermic administration of heroin (diacetylmorphine) whose use by the mouth in pectoral ailments is so familiar to every one, both of which are alkaloids of opium. Most of the text-books either fail to mention these at all or only in an indifferent manner. Their frequent use for the past three years entitles me to speak somewhat clearly as to their application. To facilitate brevity I shall describe their actions and uses in comparison with morphine, as you are all familiar with the latter.

Morphine, by the mouth or hypodermically, gives almost identically the same results, the only difference being in the relative size doses required by the particular route. With heroin this rule does not obtain. The drug acts in a distinctly different manner when given hypodermically than when administered by the mouth; it is not an antidoloric, nor a true narcotic. It will relieve to some extent slight intrapectoral pains, but is unreliable. In one-twelfth grain doses it sometimes nauseates and gives rise to distressing symptoms of oppression—one-twenty-fourth to one-thirty-sixth grain as an adjunct to various expectrants offers the most satisfactory results.

But heroin hypodermatically is a distinct narcotic and a substitute for morphine, its advantages in most instances narrowing the field for the latter very markedly.

The relief from pain is as complete and as rapid. It is quite as reliable but is less dangerous. The familiar stimulation, excitement, enticing exhilaration are much less, or entirely absent. Its effects are more transient, lasting only from one to six hours, according to dose and character of pain.

Narcosis is less profound. Nausea and vomiting, coated

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\* Read before the Hillsborough Medical Society, Oct. 2, 1906.

tongue, malaise, "biliousness" and similar sequelæ are exceptionally rare. Constipation is greater, but is less persistent and amenable to prompt relief. In asthmatic attacks it is not reliable. Nothing in my experience will compare in rapid and effective relief of asthmatic attacks to the hypodermic injection of five to ten minims of adrenalin adrin, or adneplirin 1-1000 solution. In renal and hepatic colic it is not reliable in ordinary doses and is best combined with  $\frac{1}{4}$  gr. morphia. In cases complicated with chronic nephritis or tuberculosis it is safer than morphine. The concomitant administration of 1-40 to 1-20 gr. strychnia enhances its beneficial action; it is preferable to atropin. In shock large doses are frequently necessary and may demand repetition in thirty to forty-five minutes.

The dose of heroin hydrochloride is 1-12 to  $\frac{1}{4}$  gr., which is the only preparation I use. 1-6 gr. heroin is equal to  $\frac{1}{4}$  gr. morphine in relieving pain, but its action is more transitory.

I have had two patients who have become addicted to the use of the drug. Both were cured in a few weeks. No dangerous case of narcosis has ever come under my observation. Sometimes elicit alarming symptoms of respiratory depression; this is avoided by the concomitant use of strychnine.

Dionin, on the other hand, acts similarly whether given hypodermically or orally. Where the pain is not too severe it is preferable to either morphine or heroin. It is less constipating, is not followed by nausea or malaise, is gentler in its narcotic, somnoric action. It is slower and more uncertain in its effects, but may be given more continuously and with a greater feeling of security.

In conclusion, heroin by the mouth is not under discussion here. Heroin hydrochloride given hypodermatically is a substitute for morphine in almost the entire range of the latter's field, and is to be preferred to it.

Dionin by the mouth in average cases is preferable to either.

Morphine is necessary in some instances where neither of the others is effective.

## Proceedings of Societies.

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### LOUISVILLE MEDICAL AND SURGICAL SOCIETY, JANUARY 21, 1907.

DR. GUEST: This man was kicked or rather struck by the foreleg of a horse in 1886. He was grooming the horse at the time. He paid no attention to it; there was some abrasion at the time. About a year after that he consulted a surgeon who did the first operation under chloroform. From what the patient says I imagine he made an incision and curetted the bone. At any rate in the next four years this surgeon had given him chloroform seven times, and as he says operated on him seven times. What I believe he did was to make incisions and let out the pus.

I saw him in August, 1900. At that time he had an extensive tubercular involvement of the arm and I advised amputation. He consented and I amputated the arm August 20, 1900. The first two, three or four years he had no trouble from it. Last year I think it was that he told me that it was troubling him a great deal. I have examined the flaps very carefully and can find no reason why it should pain him, and I thought I would bring him before the Society to-night for a surgical opinion as to whether there was any condition in the flaps that was causing the trouble that he complains of now. I would like for the gentlemen to examine the stump. I do not believe there is a recurrence of the disease. Since he was operated on seven years ago there has never been a sinus or an opening of any kind.

DR. ABELL: I do not see anything in the local condition of the stump to account for the recurrence of pain. The stump seems to be perfectly healthy, and the only thing that suggests itself to me is an involvement of the nerve trunks in the scar tissue. We know that it is a long time for this to develop—seven years. (I misunderstood Dr. Guest it was seven months ago).

It is a fact that the nerve ends become bulbous and give pain. That is the only explanation that suggests itself to me. The stump is healthy and there is no pain upon pressure.

DR. HENDON: I cannot conceive of anything that would bring about the line of symptoms Dr. Guest details except the involvement of the nerve ends in the scar tissue.

DR. HIBBITT: I saw this case some six years ago. I dressed it for a surgeon several times while he was out of the city. That was before Dr. Guest operated on him, and my recollection of the

trouble at that time was that it was an abscess that had broken and closed again, and had been opened four or five times by this surgeon. The future of the case I had lost sight of until I heard Dr. Guest report it to-night. It looks like he has a healthy stump.

DR. POPE: The first thing I would suggest is an examination of the bone with the X-ray to see if there is any bone trouble. If not, I think with Dr. Abell, that we had to deal probably with some nerve trouble.

I remember the case of a man that I took to Dr. Dugan some ten years ago. He was a student of one of the colleges. He had had an old fracture and complained of pain just above the elbow joint, and we decided that we had to deal probably with a fibrous neuroma. The operation was done under local anæsthesia. It was about the time that Schleich's solution had come into notice and it was used in this case very successfully, and we found a growth in one side of the nerve and it was removed with very fair results. The man suffered some pain but made a recovery and the parallel between that case and the case exhibited to-night is very suspicious of a similar growth.

I would suggest before going any further with it that an X-ray examination be made of the bone.

DR. GUEST: I am obliged to the Society for their opinions. I shall take Dr. Pope's advice and have an X-ray examination of the bone made.

DR. J. R. WATHEN: The first specimen is one of an enlarged prostate. This patient was operated on for retention of urine with phosphatic deposits in the urethra. I removed this specimen by the suprapubic method. The prostate weighed five and a half ounces, a little larger than the average reported by Fryer. This was the type of prostate rising high in the bladder, and for these cases I think the suprapubic is the better method. I also have here the latest edition of Fryer's work, and I notice that the largest prostate removed weighed fourteen and one-fourth ounces; the average seems to be about three ounces. He has some beautiful cuts showing the appearances of the prostate after removal by this method.

I wish to show two specimens of appendices and report the cases. The first case was in a boy about 22 years of age who was taken with sudden, acute pain in the region of the appendix; his temperature and pulse were elevated. I operated on him and found a large inflamed appendix adherent to the small intestine



at the cæcal end of the latter. A few days after the temperature did not fall, but kept getting a little higher, we suspected typhoid fever. Later developments showed that it was typhoid fever; he had the rose spots and diarrhœa and other symptoms. He began with an attack of appendicitis and the typhoid fever was a complication of this. Whether the typhoid fever started this I do not know.

The other specimen is a large appendix which I removed, and the unique feature about this case is that I managed to get the patient out of bed on the eighth day, and he left the infirmary on the twelfth day and was able to return to his work on the fourteenth day. This was accomplished by the use of a new method of suture used in the abdominal wound. It is nothing particularly original at all, but I believe by the proper incision and the proper method of suturing of the abdominal wound, we can get these patients out of bed earlier than usual.

I know that in the East Dr. Bott gets his patients out of bed the next day after they are operated on. He uses adhesive bandages. I am not ready to adopt that method, but I have a series of cases and this case is an illustration of one gotten out of bed on the eighth day.

DR. HENDON: I would like to ask Dr. Wathen in closing the discussion to describe at least in outline the means he used to prevent hemorrhage, and if he was embarrassed at any stage of the operation by hemorrhage and how long he allowed his drainage to remain in position.

He referred to getting patients out of bed soon after operation. Of course it is a subject that can be greatly overdone. There is striking tendency among surgeons to become over rash in that respect. There is no doubt but the adjustment of an adhesive bandage is of great value in those cases and enables us to get the patients out of bed. If you can save a patient a week's confinement in the infirmary it is quite a gain.

I recently used this adhesive bandage in a case of my own where I removed a large fibroid tumor which necessitated an incision from the umbilicus to the pubes, and this patient I sent home in fourteen days with the application of an adhesive bandage. This bandage is simply a three-tailed bandage around the body. This makes a beautiful bandage and is a great comfort to the patient. They notice it and remark upon the security and support that it gives them.

DR. ABELL: I would like to compliment Dr. Wathen on the

beauty of the specimen for it is one of the prettiest specimens I have ever seen. It also illustrates the beauties of the suprapubic method in removing the enlarged prostate. It seems that many surgeons prefer the perineal to the suprapubic route in this type of cases, but in my personal experience I think even in the smaller types that we can secure a better enucleation by the suprapubic than from the intrapubic.

DR. J. R. WATHEN (*closing*): I will only add a few remarks in connection with the methods as regards after treatment, and I believe that that is the most important point. The technique of the operation was that advocated by Fryer in his new edition.

The hemorrhage was not severe and warm water irrigation soon stopped it. By the time we had closed up and were ready to put him to bed there was still a little oozing and that was controlled by packing with gauze. I ordered the nurse to give him a saline injection at the time.

As to the after treatment, in this case I used a tube an inch in diameter and an inch and a half long. You can introduce the fingers to draw out the blood clots. The bladder was drawn up and the sutures introduced through the recti muscles and through the wall of the bladder. Finally when this tube is placed in the bladder it is tight and allows no leakage. It is remarkable how the wounds heal.

Another point that Fryer brings out is that the large tube should not touch the bladder wall. It should merely hang in the bladder and then it is cut off flush with the abdomen. Then gauze is placed over it. The stitches are taken out in about eight days and the tube comes out when the gauze is taken out.

T H E

# American Practitioner and News.

"NEC TENUI PENNÂ."

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## Editorial.

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*The Importance of Urinalysis.* The objective and subjective symptoms, valuable as they are, in arriving at a correct diagnosis, very often leave the physician groping in the dark as to the exact nature of the case, or which is equally as bad, laboring under a mistaken diagnosis. To be correct in diagnosis and have a perfectly clear mental picture of the pathology of the case in hand, is a thing to be desired by every physician, and serves as the only correct foundation upon which to build a rational and scientific treatment. The urinary excretion bears such a direct ratio to so many bodily functions, that its deviations from the normal very often furnishes evidence for an absolute and positive diagnosis. The urinary findings in some of the kidney lesions are as pathognomonic as the "rusty colored" sputa of pneumonia, and it often happens that there is nothing special to direct attention to the condition of the kidneys until the urine is examined as a matter of routine. It is not for the purpose of confirming the existence of a kidney lesion always that renders urinalysis desirable, but to determine other bodily functions quite remote from the kidney. How often

do we find a persistent and very aggravated headache continue to recur from time to time with none of usual causes, such as indigestion, loss of sleep, eye strain, etc., existent when a proper urinalysis will relieve the cause; proper treatment given; patient relieved. The amount of urea, alkaline phosphates, the presence of indican and a number of other urinary excreta, add valuable data in the summing up of many pathological conditions. The diazo-reaction in a suspected case of typhoid fever, may be all that is necessary in connection with other symptoms to confirm the diagnosis. Many patients who complain of gastric intestinal disturbance, gradual loss of flesh, anemia and debility, present a clinical picture of mal-nutrition due to gastro-intestinal disease per se, when upon a careful analysis, both chemical and microscopic; to our surprise we discover the existence of diabetes and chronic nephritis, or other serious conditions that the investigation of the urine alone will make clear. The importance of this means of investigating the causation of disease, and its direct clinical significance, is becoming more thoroughly appreciated and understood, and will soon become as much a part of the physician's routine examination as the feeling of the pulse or taking the body temperature.

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#### NOTES AND PERSONALS.

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WE grieve to announce the death of our President, Theodore D. Buhl, April 7, 1907.—Parke, Davis & Co., Detroit.

WE wish to announce that on account of Dr. Jno. L. Pomeroy being away on his wedding tour, the serial article on "Insanity" does not appear in this issue.

WE wish to announce that The American Anti-Tuberculosis League, will hold its next meeting at Atlantic City, N. J., June 1 to 4. Dr. Edward Guion, of Atlantic City, will be Chairman of the Committee of Arrangements.

THE American Institute of Social Service has received from Dr. Sommerfeld, a physician and scientist of Berlin, a valuable anti-tuberculosis exhibit for the department of industrial hygiene

in its Museum of Security. There are 45 vials containing as many different kinds of dust, mineral, animal and vegetable, produced in our various industries. The same number of photographs show how these various dusts appear under the microscope. Extremely realistic models in wax, colored to life, represent human lungs as they are affected by occupational dusts; other models show normal lungs for comparison; while still others show the effects of industrial poisons on the system.

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#### PRACTICAL DIETETICS.

WE desire to call especial attention to the announcement of *Practical Dietetics*, edited by Alida Francis Pattee, in this issue of the *American Practitioner & News*. We have thoroughly examined the little work and find it replete with information of inestimable value to the busy physician, and especially those who have not the advantage of the thoroughly trained nurse. We consider it well worth the price asked for it, and cheerfully recommend it to our readers. We have arranged with the author by which subscriptions may be sent to this office and receive prompt attention.

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#### AMERICAN MEDICAL EDITORS' ASSOCIATION.

The 38th annual meeting of this Association will be held at Atlantic City on Saturday, June 1 and Monday, June 3, with headquarters at the Marlborough-Blenheim Hotel. This active Association now numbers nearly one hundred and fifty members with many applications in hand for action at the coming meeting. An interesting programme has been prepared and the following are among the papers to be presented:

President's Address—The Future of Medical Journalism, by Jas. Evelyn Pilcher, M. D., Ph. D., LL. D.

Shortcomings of Physiology, The Chief Obstacle to Medical Progress, The Need of Editorial Intervention in Such Questions, by C. E. de M. Sajous, M. D., Philadelphia, Pa.

How Can We Make Medical Journalism Better? (a) For our readers. (b) For our advertisers. (c) For ourselves. By W. C. Abbott, M. D., Chicago, Ill.

A Word or Two From an Ex-Journalist, by Samuel W. Kelley, M. D., Cleveland, Ohio.

The First Medical Journals, by O. F. Ball, M. D., Saint Louis, Mo.



The Psychology of Medical Journals From the Readers Standpoint, by T. D. Crothers, M. D., Hartford, Conn.

Further Reflection on the Official Versus Independent Medical Journals, One Year's History, by Wm. J. Robinson, M. D., New York City.

Journalistic Suggestions From a Semi-Disinterested Standpoint, by Wm. Porter, M. D., St. Louis, Mo.

The Situation, by C. F. Taylor, M. D., Philadelphia, Pa.

Some Aspects on Medical Journalism, by W. F. Waugh, M. D., Chicago, Ills.

The Neglect of American Mineral Springs and Climatic Resorts by Our Medical Press, by G. T. Palmer, M. D., Springfield, Ills.

A Few Feeble Remarks, by W. A. Young, M. D., Toronto.

The American Medical Editors' Association, Past, Present and Future, by Joseph MacDonald, Jr., M. D., New York City.

On account of the largely increased membership of this Association, it is anticipated that the coming meeting will exceed any prior meeting in point of attendance.

The Annual Editors' Banquet, which is always the social event of the week, will be held at the Marlborough-Blenheim Hotel on Monday evening, June 3rd.

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## THE XVI. INTERNATIONAL MEDICAL CONGRESS AT BUDAPEST IN 1909.

THE XVth International Medical Congress, held in Lisbon, have chosen Budapest, the capital and residence of Hungary, for the site of their next assembly, and the preliminaries are already in process.

His Imperial and Apostolic Royal Majesty, the King, has graciously taken upon himself the patronage of the ensuing congress. The state and town have each contributed 100,000 crowns to defray the expenses.

The committee for the organization, execution, disbursements and reception, as also for the sections is already formed and the statutes are drawn up.

There are 21 sections, each branch of science having a separate section assigned to it.

The date of the opening is fixed for the 29th August, 1909, and the sessions will be continued till the 4th September.

There is every reason to presume that the congress will be well attended. Hitherto they have shown an attendance of from

3000 to 8000 participants. Judging from the geographical situation of Budapest, at least from 4000 to 5000 participants may safely be reckoned upon.

The managers of course, attach the utmost importance to the scientific activity of the congress, and every effort is being made to win over the most prominent representatives of medical science.

The first circular, which will contain every necessary information as well as the statutes, will be ready for circulation in the course of the year 1907. Meanwhile the Secretary-general of the congress (XVIth International Medical Congress, Budapest, Hungary, VIII., Esterhazy-utcza 7), will have much pleasure in giving information to inquirers.

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## Recent Progress in Medical Science.

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### GENERAL MEDICINE.

IN CHARGE OF

JNO. J. MOREN, M. D., GEO. B. JENKINS, M. D.,

DUNNING S. WILSON, M. D.,

LOUISVILLE, KY.

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**Acute and Chronic Indigestion.**—Deaver (*Boston Medical and Surgical Journal*.) “Among the many heritages which civilization brings in its wake, there is one disease so peculiar to civilized communities that its total absence may almost be considered pathognomonic of a semi-savage stage of society. This disease is dyspepsia, and more particularly chronic dyspepsia.

“While acute dyspepsia is probably occasionally seen in the native Filipino, and in the Hottentot or in the inhabitants of the Somaliland, it is unquestionably rare, and chronic dyspepsia is practically unknown. It remained for civilization, with its over-eating and under-chewing tendencies, to fully develop these maladies, until at the present day they have assumed an importance in medicine and surgery second to no other affection.”

To illustrate the frequency of dyspepsia the following figures were quoted: Among 31,157 dispensary patients 4,924 or 15.8 per cent gastro-intestinal cases; in 7,193 or 23 per cent the respiratory system was affected; in 859 or 2.7 per cent the genito-urinary system was diseased; in 903 or 2.8 per cent the cardiac vascular system was diseased.

In determining the cause of dyspepsia Deaver gives two important principles—in acute affections trust to physical examination rather than the history, and in chronic diseases put more reliance on an accurately detailed clinical history than on the physical signs. After these rules have been used then, and then only, will you have recourse to blood examinations, laboratory methods, etc. He does not consider test meal of any advantage in diagnosing between functional and organic diseases, lavage as practiced by internist and specialist as over done, and misleading to patient and physician.

He devotes much space to the consideration of surgical diseases as a cause of acute and chronic dyspepsia, which is very hard to extract; those interested would be well repaid for studying.

**Habitual Constipation, viewed from the standpoint of modern evolution of dietetics, is a physiological phenomenon.**—Spivak (*Medical Record*.) “The conception of regular and irregular movements of the bowels is vague and indefinite as far as the physician is concerned. A movement of the bowels once a week or even at longer periods is called normal by many of our patients, and one or two movements daily are often designated as constipation if the movements leave the patient in an unsatisfied and ever longing state of mind. We have no clinical methods by means of which the physician could make a diagnosis of constipation, and every intestine therefore should be a law unto itself.” The author then goes into the great difficulty of determining the etiological factors in the majority of cases and the consequent temptation of just dropping into the diagnosis of “habitual constipation,” thus by the addition of the prefix “raising the condition to the dignity of a disease *sui generis*,” and having yielded to this great temptation, to put the patient through the whole gamut of medical, thermal, mechanical and electrical treatment in the hope of forcing or coaxing the bowel back to a normal or at least comfortable degree of peristalsis. He further points out the herculean task of determining a standard of what shall be the normal number and relative frequency of evacuations and consistency of feces which will promulgate the greatest comfort in the individual, for it is the operation and given results of these factors by which the patient judges his “cure” or the doctor’s failure in the case. The writer quotes from Nothnagel that constipation “is primary and

independent form of disease," and must be considered as such. But he does not believe the problem will be solved till more is learned about the feces; and as "a sign of the times" points to the increased demand for works on the feces (Schmidt and Strassburger). "At a recent meeting of the Naturforscher Gessellschaft, Schmidt declared that all theories as to the causation of constipation untenable, and that the only rational explanation of this obscure condition is found in the extensive utilization by the bowel of the nutritive ingredients contained in the food which explains the small quantity and dry quality of the fecal matter found in the majority of cases of true constipation. Now the question arises is the intensive utilization a pathological or physiological phenomenon."

• Taking this as a starting point, the author has been conducting a number of experiments on these patients with the view of ascertaining the quantity of food ejected and the corresponding quantity of feces expelled. He describes at length factors which enter into and the difficulties which arise in the course of a series of observations of this character, and pointing out among other things that "the healthy man possesses a certain capacity for the amount of food injected and absorbed as well as for the fecal matter produced, the relation between the two not being a content number. After continuing in this strain and citing a hypothetical case to illustrate his meaning, viz: The influence of the present day dietetics on constipation he arrives at the following deductions: "Habitual constipation in a good many cases is due to a mistaken diagnosis, the tendency of civilized life in general and modern dietetics in particular is toward the production of lesser quantities of fecal matter and less frequent interval of evacuation."

**Gastropstosis, in relation to hyperchlorhydria.**—Reissman (*Medical Record*) regards relaxation of the abdominal muscles as the essential feature in gastropstosis or splanchnoptosis. The function of the abdominal wall is to keep the abdominal organs in a physiological position, and regulates the circulation of fluids. Hyperchlorhydria, hyperchlorhyria and achylia may be due to gastrectomy, and the studies by Rose shows hyperchlorhydria may be associated with relaxation of the abdominal wall. Reissman found the splashing sound with all of his cases. His treatment consisted of diet: Carlsbad salts, atropine gr. 1-240 three times a day. He prefers the vichy tablets to be used two or three hours after a meal to relieve the pain of free acid. The

basis of treatment, however, was the use of the adhesive bandages as advocated by Rose.

**The Early Diagnosis of Gastric Carcinoma.**—Thompson's (*Cleveland Medical Journal*) plea is for recognition and early operation in those cases that their condition permit them to "go about" but no tumor can be palpated.

He concludes his article by summarizing the following conditions which combine to make operation not only justifiable but desirable.

1. The patient's age should be within the average cancer developing period for gastric cases, i. e., between 40 and 65 years.

2. There should be a rapid and decided loss of weight and strength, without other assignable cause, such as chronic gastric catarrh, neurasthenia, mental strain or worry, or chronic general disease, such as diabetes, etc.

3. There should be evidence of some degree of stagnation of food contents in the stomach.

4. There should be failure to improve in marked degree under treatment, after a few weeks trial. With these four conditions fulfilled, exploration should be seriously considered despite the absence of gastric pain or other marked gastric symptoms. In addition there may be:

5. A leucocytosis of 12,000 to 16,000 with polynucleosis and a moderate secondary anemia, with low color index.

6. Decided dilatation of the stomach. With these two additional factors, operation is distinctly indicated. Still farther there may be:

7. Occasional attacks of vomiting, often without definite relation to food indigestion.

8. Occult or visible blood in the vomitus or stools.

8. Epigastric or right hypogastric rigidity and tenderness on deep pressure. With these symptoms added the diagnosis can admit of practically no question. In this order of relative importance of symptoms I have purposely left until the last, as being often unreliable.

10. The demonstration of hyp acidity or an acidity, and

11. The so-called carcinomatous cachexia, which, while plain enough towards the fatal ending, is often wanting as an early definite appearance.

**Puerperal Psychosis.**—(*Herzer-All., Zeit fur Psyc.*) The author among 1896 patients admitted to the Basel psychiatric clinic during the last twenty-five years found 221 cases of puer-



peral, or as he prefers to call them, "generation" psychosis. He agrees with other authors that there is no special generation psychosis, but he divides his cases—after Kraepelin's classification—as follows: Dementia præcox, 107 cases; manic-depressive insanity, 32 cases; hysteria, 18 cases; acute confusion (amentia), 15 cases; alcoholic insanity, 12 cases; epilepsy, 11 cases; neurasthenia, 5 cases; general paresis, 4 cases; eclampsia, 2 cases; chorea imbecility, 2 cases; diagnosis uncertain, 13 cases. According to time of appearance, the generation psychosis may be divided into: (1) Those of pregnancy. (2) True puerperal cases (those coming on at any time within the first two months after delivery), and the lactation psychosis. Of the 221 cases, 46 belonged to class 1, 102 to class 2, 69 to class 3, while in the remainder, the exact time on onset could not be ascertained. He next takes up the cases according to clinical form, and discusses their relation to hereditary predisposition, personal history, age, whether occurring before or after delivery, the number of the pregnancy in which they appeared, the nature of the labor and complications, with the percentage of recoveries under each head, and after history as far as could be learned. In general, recovery was more frequent in the older patients, though of the primipara, those under twenty-five years more frequently got well. The general percentage of recovery for the dementia præcox cases was fifty-seven, which is much better than that found in dementia præcox unassociated with reproduction. Heredity did not appear to influence recovery in these cases.

**Aural and Mental Disease.**—Bryant, (in a paper in the *N. Y. Medical Journal*,) states that in his experience ear disease is much more common in the insane than the sane, having found it exceptional not to find some demonstrable functional disturbance of the ear, finding it present in 90 per cent of those examined. In many cases the history of aural disturbance antedated appearance of insanity, and in others lacking a definite history, the condition was such that it must have existed prior to the mental disturbance.

Savage (*British Medical Journal*) claims that there is no such disease as insanity; that it is a negation, and depends more on the social than on the medical condition; that certain forms are due to direct brain decay, others to brain intoxication, and others to morbid habit or surroundings, or are the natural but morbid mental growths occurring in certain unstable individuals.

**Melancholia.**—Wherry (*American Jour. Insanity*). Reasoning that the emotions proceed from visceral sensations and do not originate in the brain, the author considers melancholia a disease of the emotional sphere, to arise from abnormal visceral conditions. He lays down the following propositions: 1. That there are organic as well as ethical emotions. 2. That the relation of the body to the mind is that of master to servant. 3. That the influence of the brain has been overestimated in the production of abnormal mental states. 4. That the organic emotion of fear has its origin in visceral conditions. 5. That organic fear is a primitive instinct and necessary to the preservation of the individual. 6. That abnormal organic fear is the basis of melancholia. 7. That melancholia is but the expression of abnormal visceral conditions. 1. The organic emotions are primary, dating back to the time of unicellular existence, being an attribute of the cell itself. They may be called instinctive and have to do with self-preservation and reproduction and are primarily desire and fear. In the higher forms of life they are tempered by experience, through which has been evolved the faculties of reason and judgment. 2. The individual must, he thinks, be considered as a whole, and instead of the mind dominating the body, the mental content is made up very largely of the organic sensations, especially being influenced by those arising from the viscera. The consciousness of self which is made up of these organic sensations can hardly be separated from the general mental state at any time. 3. Taking as an example the action of alcohol or morphin, the author thinks it is incorrect to assume that the symptoms observed after overdoses of these drugs are due to their action upon the brain especially, but holds that their effect upon other cells, as those of the liver, etc., with resulting bodily sensations, are equally responsible. 4. In support of this proposition, he alludes to the depressing effect of disorders of the stomach, the intense apprehension of heart disease, especially of angina pectoris, etc. The author believes that the feeling of fear always arises from conditions of the thoracic or abdominal viscera. 5. Organic fear has to do with self-preservation, and is primitive, being traceable back to the cell itself. "A continuous feeling of fear can only come from abnormal bodily cells which are reacting to a disease whose toxicity is neither so overwhelming as to prohibit the reception of sensory stimuli by the brain, nor so acute as to awaken the attention of consciousness to the fact of its presence." 6. Analyzing the

symptoms of melancholia, the author finds that they all cluster around the feeling of fear. In pure melancholia there is no intellectual impairment. Such impairment when present points to the incident of dementia which he holds is due to concomitant brain involvement, and cannot correctly be considered as a result of melancholia. 7. That melancholia is an expression of abnormal visceral conditions he thinks is shown by the fact that it has always been known as the most, if not the only, curable of mental disorders. Empirically it was found that to effect a cure, treatment had to be addressed to the visceral disorder or to abnormal nutritional state nearly always present. On the other hand, in the presence of disease leading to definite changes in the brain, we in the main stand powerless.

THE TUBERCULOSIS fight goes merrily on and slowly but surely new facts are placed in the possession of the campaigners. Gradually the trend of opinion regarding the route of infection in tuberculosis is towards the intestinal tract, and more emphasis is being made on the ingestion of foods. Lawrence F. Flick, in a recent article "The Way of Infection in Tuberculosis," (*Medicine*, in December, 1906), summarizes the method of blocking the way of infection as follows:

"We will have to control the exit of the tubercle bacillus from hosts already infected. This means that every individual who has tuberculosis must be brought under observation and taught how to devitalize all tuberculous matter given off. (2) We must endeavor to sterilize all enclosures which have been infected with tuberculous matter, as well as those things which have been infected by reason of being within those enclosures or being used by persons who have tuberculosis. This is a herculean task, which cannot be accomplished immediately. Until it can be accomplished every effort should be made to have people to ventilate their houses and to expose them as much as possible to fresh air and sunlight. (3) We must look after the children who are exposed to tuberculosis: (*a*) through contact with those who have the disease; (*b*) through living in enclosures in which the disease has existed; and (*c*) through infected food. Such children should be placed under better environments, be given food which is sterile from tubercle bacilli, and be kept well nourished. Special supervision should be given to their upper air-passages and buccal cavities, and as far as possible those parts should be kept in a perfectly healthy condition."

In support of the findings of the Royal Commission regarding

the infectiousness of bovine tuberculosis to the human being, we have in this country the opinions of E. C. Schroeder and W. E. Cotton, who have in a very exhaustive article (*The Relation of Tuberculous Lesions to the Mode of Infection*, Bureau of Animal Industry—Bulletin No. 93), reached the conclusions which bids fair to narrow the findings down to the dairy products as being largely responsible for the wide spread prevalence of tuberculosis. Their conclusions and summary are quoted here, at some length, as being very important findings in the case:

“(1) We believe that we have shown that systematic investigation is gradually retiring the inhalation theory that has long been used to explain the frequency with which tuberculosis is a pulmonary disease, and that the ingestion of tubercle bacilli is being proved to be the real method through which tuberculous infection reaches the lung, as well as other organs of the body.

When substances of dissimilar specific gravity move at the same rate of speed under similar conditions, it is a physical fact that the force required to change their direction is proportionately greater as the specific gravity increases. If the substances of dissimilar specific gravity are air and dust, and the change of direction is due to movement through the far-from-straight moist-walled passages from the nasal openings, or even the mouth, to the lung, the dust will be thrown at every turn, because of its greater specific gravity, against the walls of the air passages, to which it will adhere because they are moist, and the ciliated epithelium with which the respiratory passages are lined will tend to move the adherent particles outward and not inward. It is, hence (excepting, possibly, with extremely forcible inspiratory movement in a dust-saturated atmosphere), almost a physical impossibility for dust particles to penetrate with the air into the lung. If no other argument than this could be brought to bear against the inhalation theory of pulmonary tuberculosis—and it applies with equal force against inhalation of other infectious material, including the micro-organisms of pneumonia—it would be sufficient to condemn it.

(2) Not only is the inhalation theory dying and making room for the fact that ingestion is the true mode of infection with tuberculosis, but the theory that dust from pulverized sputa is the most important factor in the transmission of tuberculosis, from subject to subject, is gradually losing ground also and giving way to the conviction that fresh tuberculous material must be looked to as the true agent through which infection occurs.

(3) While many cases of tuberculosis undoubtedly have their origin through food directly or indirectly infected with fresh tuberculous material by tuberculous persons, there is no means to-day by which persons are brought into closer contact with fresh tuberculous material than milk and dairy products obtained from, and in the environment of, tuberculous cows. The wide use of milk, its rapid distribution because of its perishable character, the ease with which it may be contaminated by having tubercle-bacilli-laden feces, splashed, sprayed, switched, or otherwise introduced into it in a fresh state, all speak for one conclusion, namely, that we have no more active agent than the tuberculous cow for the increase of tuberculosis among animals and its persistence among men.

#### SUMMARY OF THE CONCLUSIONS.

The main facts are as follows:

(a) Tuberculosis is a disease contracted through the ingestion of tubercle bacilli.

(b) The lung is the most frequent organ affected, independently of the point at which the infectious material enters the body.

(c) Tuberculous infection may pass from one part of the body to another remote to it without leaving a chain of lesions to mark its path.

(d) Fresh tuberculous material has the highest, and dried and pulverized material a doubtful significance.

(e) Tuberculous material from cattle has the highest virulence for all tested species of the mammalian kingdom, to which man anatomically and physiologically belongs, and tuberculous material from man has a lower virulence.

(f) Man is constantly exposed to fresh tuberculous material in a helpless way through his use of dairy products from tuberculous cows and cows associated with tuberculous cattle.

It seems from this array of facts, every one of which is based on positive experimental evidence, that we should feel no doubt regarding our plain duty, which is, no matter what other measures we adopt in our fight against tuberculosis, not to neglect one of the chief, if not the most important, source of infection—the tuberculous dairy cow.”



## BOOK REVIEWS.

A TEXT-BOOK OF THE PRACTICE FOR STUDENTS AND PRACTITIONERS.—By Robert Amory Hare, M. D., B. S. C., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, Physician to the Jefferson College Hospital, one time Clinical Professor of the Diseases of Children in the University of Pennsylvania, author of a text-book on Practical Therapeutics and a text-book of Practical Diagnosis. Second edition, revised and enlarged, illustrated with 131 engravings and eleven plates in colors and monotone. Lea Bros.

This is the second edition of Dr. Hare's most excellent work. He has the happy faculty of presenting his subject in a readable manner which cannot always be said of the author of a scientific treatise. Combined with this he has the experience of twenty-two years as authority for his views, and the fearlessness of stating them, however they may differ from or coincide with the views of others. He has divided the treatment of his subject under the following heads: Infectious Diseases, Diseases of the Respiratory System, Diseases of the Circulatory System, Diseases of the Digestive Tract, Diseases of the Peritoneum, Pancreas Kidneys, and Biliary Tract, Diseases of the Ductless Glands and Lymphatic System, Diseases of the Blood and Nutrition, Intoxications, Diseases due to Animal Parasites, and Diseases of the Nervous System.

A brief review of some of his most characteristic work is best selected from the section devoted to Infectious Diseases, e. g. Typhoid fever—increased attention to and emphasis on preventive measures are imperative, such as the disinfection of secretion, filtration of water and the chemical disinfection of the same. Copper sulphate 1-100,000 or even to 400,000 seems the most effective agent at present. Examination of the blood is insisted upon in diagnosis. The statistics on serum treatment are valuable and of interest. Complications and sequelae are exhaustively treated. Under treatment antipyretics are discouraged, while antiseptics are favorably mentioned, the best being acetone, sulphocarbolate of zinc and turpentine.

Under treatment of Hemorrhage, he says the large number of remedies suggested for direct control, indicate how feeble they are. Immediate surgical interference in cases of perforation is emphasized. Some physicians, as well as high government officials, have questioned the efficacy of vaccination as a protective measure against variola. There is no uncertain ring in Dr. Hare's text on this subject. To quote: "In London in 1838, the death rate from small pox was 1,064 per million, while in

1889 it was 1 per million, and in 1890 nil per million. During 1904 the disease was totally eradicated from New York and Philadelphia by vaccination and quarantine." Dr. Hare is very pronounced when he says that the greatest aid in differential diagnosis of true cerebrospinal meningitis and that due to influenza is by means of lumbar puncture.

Under Diphtheria, he says: The physician who fails to use antitoxin when it is to be had, is guilty of a gross lack of professional knowledge, or is atrociously careless of his patient's welfare. The most recent knowledge on the etiology of Yellow Fever is concisely reviewed. Gonorrheal Fever is considered, along with other diseases due to specific infection. Dysentery and Tuberculosis are thoroughly treated. The colored plates on Vaccinia, Measles, Dysentery, Enteritis are valuable additions to the text. This gives at best but an incomplete idea of the thoroughness of Dr. Hare's work. The other diversions of his subject are equally if not more ably treated. The plates used in connection with the diseases of the Nervous System are very helpful. The work in general is worthy of a reception even better than that of the first.

**OSBORNE'S INTRODUCTION TO MATERIA MEDICA AND PHARMACOLOGY.**—An introduction to the study of Materia Medica and Pharmacology, including the Elements of Medical Pharmacy, Prescription Writing, Medical Latin, Toxicology and Methods of Local Treatment. For the use of Students of Medicine and Pharmacy. By Oliver T. Osborne, A. M., M. D., Professor of Materia Medica, Therapeutics and Clinical Medicine in Yale University, ex-President of the American Therapeutic Association, etc. In one 12mo volume of 167 pages. Cloth, \$1.00, net. Lea Brothers Co., Publishers, Philadelphia and New York, 1906.

As the author sets forth in the preface the little work of Dr. Osborne's is intended as an introduction to the more extended study of Materia Medica and Pharmacology. Dr. Osborne in a very concise and practical manner takes up the subject of Pharmacology and deals with a great many of the more important drugs in every day use, and gives their most important physiologic action. As every student of medicine is not a pharmacist, his chapters on Pharmacy and Toxicology are especially interesting and instructive. He also gives some very interesting instructions in the art of prescription writing and the metric system of weights. Taken in all we know of no recent publication that gives us more pleasure in recommending.

**PRACTICAL DIETETICS WITH REFERENCE TO DIET IN DISEASE.**—By Alida Frances Pattee, Graduate Department of Household Arts State Normal School, Framingham, Mass.; Late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City; Former Instructor at Lakeside, St. Mary's, Trinity, and Wisconsin Training School

for Nurses, Milwaukee, Wis.; St. Joseph's Hospital, Chicago, Ill.; Special Lecturer at Bellevue, Mount Sinai, Hahnemann and the Flower Hospital Training School for Nurses, New York City; St. Vincent de Paul Hospital, Brockville, Ontario, Canada. Fourth edition. A. F. Pattee, publisher, Mount Vernon, N. Y., 52 W. 39th Street, New York.

The proper preparation of foods for the sick is a matter of much interest to the attending physician, as so much depends on the proper dietetic management of many cases. The proper feeding of the sick is not only an art, but also a chemical science, and should no longer be left to haphazard methods. We know of no work on the subject that gives us more pleasure in recommending than "Practical Dietetics," edited by Alida Frances Pattee. It is a little book that should be on the desk of every physician and in the equipment of every trained nurse. It deals with the whole subject of the preparation of food for the sick in a very thorough and practical manner. The chapter alone on the various preparations of milk is worth much more than the price of the book.

**PARAFFIN IN SURGERY.**—A critical and clinical study by Wm. H. Luckett, M. D., Attending Surgeon, Harlem Hospital, Surgeon to the Mt. Sinai Hospital Dispensary of New York, and Frank I. Horne, M. D., Formerly Assistant Surgeon Mt. Sinai Hospital Dispensary. 12mo.; 38 illustrations; 118 pages. Surgery Publishing Co., 92 William Street, New York City. Cloth, \$2.00.

This book covers a special field in surgery of absorbing interest both to the surgeon and general practitioner. The research and original investigations made by these authors in the use of Paraffin have exploded many fallacies previously maintained. It presents the Chemistry of Paraffin, the Early Disposition of Paraffin in the Tissues, Physical State of the Paraffin Bearing on its Disposition, the Ultimate Disposition of Paraffin, Technic and Armamentarium. It thoroughly covers the use of Paraffin in cosmetic work such as Saddle Nose Deformity, Depressed Scars, Hemiatrophia, Facialis with a large number of photographs showing cases before and after operation, with illustrations of micro-photographs of the Disposition of the Paraffin in the Tissues. It also presents other conditions of a functional character, where Paraffin can be used with service such as Inconstinency of Urin, Umbilical, Hernia, Umbilical and Ventral Hernia, Epigastric Hernia, Inguinal Hernia, etc. The subject is presented in a scientific yet comprehensive manner.

Full details are given as to the method of preparing the Paraffin as well as the method and manner in which it should be injected. This book presents a wide field for the use of Paraffin, and a copy should be in every physician's library. It is printed upon heavy coated book paper, and attractively bound in the best quality of heavy red cloth, stamped in gold.

PLASTER OF PARIS AND HOW TO USE IT.—By Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo; 72 illustrations; about 100 pages. Surgery Publishing Co., 92 William Street, New York City. Cloth, \$1.00.

This is one of the most useful books ever presented, not only on account of the general demand for the information and instructions upon the subject which this book so explicitly, practically and comprehensively covers, but because this knowledge was not previously available except from such a vast experience as enjoyed by Dr. Ware, or, in part, by reference to many books on allied subjects.

It is a vivid narrative, profusely illustrated, of the many uses to which Plaster of Paris is adaptable in surgery. The whole subject, from the making of the bandage to its use as a support in every form of splint, corset or dressing, is graphically described and illustrated. The use of Plaster Paris in dental surgery is also covered. The book is presented in the artistic manner characteristic of the productions of the Surgery Publishing Company. It is printed upon coated book paper and attractively bound in heavy red buckram, stamped in white leaf and gold. Price, \$1.00.

DISEASES OF THE STOMACH.—A text-book for Practitioners and Students, by Max Einhorn, M. D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital; Visiting Physician to the German Hospital. Fourth revised edition. William Wood & Co., New York; 1906.

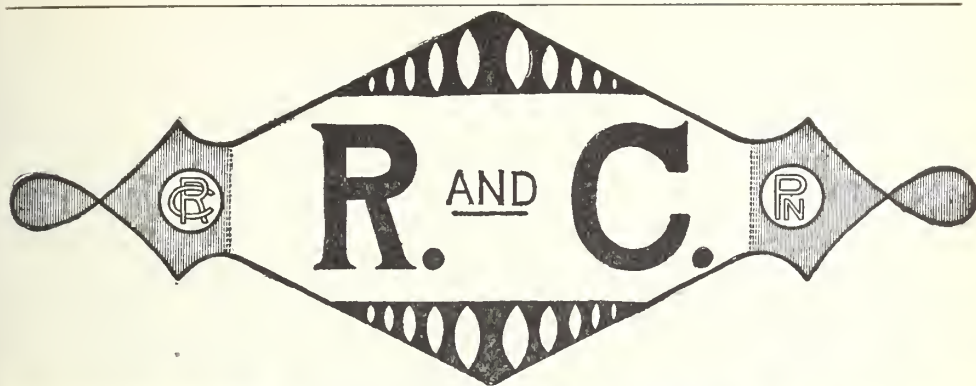
The text remains the same, but the usefulness of the volume has been improved by the addition of the recent knowledge of this subject gained by the work of Powtan, Cannon, Starling, etc. More space is devoted to Roentgen Rays, Raduim and illumination than in the third edition. The author has made several changes in the treatment of the various diseases which makes the book more helpful to the practitioner. A standard book brought up-to-date.

J. J. M.

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It is doubtful whether the classical operation for ingrown toenail cure permanently in even a fair percentage of cases. Conservative treatment will usually accomplish as much, even in the presence of granulating masses. This treatment includes drawing the flesh away from the nail with a strip of adhesive plaster, insertion of a gauze packing under the nail edge and the application of an insorbent antiseptic dressing.—*American Journal of Surgery.*





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## TONSILLITIS.

Inflammation in any form attacking the tonsillar region gives rise to symptoms of most distressing character, and at the same time provides a most favorable soil for the entry into the system of other infections. It is well to remember that at first this disease is only a local disturbance affecting the capillary system and landular structure and if promptly and efficiently treated will remain local. The constitutional symptoms as fever, headache, etc., only develop when there is considerable infection taken up.

In the treatment the first indication is to increase local capillary circulation. A local remedy must fill two requirements, *i. e.*, a detergent antiseptic and a degree of permanency in effect. Many of the remedies which have been advocated for the varied forms of tonsillitis are antiseptic, but they are not sufficiently exosmotic in their action to increase the circulation or else their effect is too transient. Glyco-Thymoline frequently applied in a 50 per cent strength with a hand atomizer produces a rapid depletion of the congested area through its well defined exosmotic property, re-establishing normal passage of fluids through the tissues, promptly relieving the dry condition of the membrane and giving an immediate and lasting anodyne effect. As a gargle a 25 per cent solution hot may be effectively used providing the process does not cause undue pain. The external application of cloths dipped in hot water and Glyco-Thymoline in 25 per cent solution greatly increases the venous circulation.



## THE ANEMIAS OF CHILDHOOD.

The anemias of early life are usually sequels of the acute diseases common to this period. The exanthemata are especially liable to be followed by a depreciation of blood quality, and a protracted convalescence often depends on this one condition alone. Moreover, the frequency with which physical stigmata or infirmities actually date from an attack of measles, scarlet fever, diphtheria or any of the other similar diseases of childhood, can often be properly laid at the door of insufficient or improper care during the very important stage of convalescence from these diseases.

It should be recognized that the hematogenic function, while exceedingly active in childhood, is yet very susceptible to all inhibitory influences, among which the toxins generated in the course of the acute diseases are most common. When a storm infection of measles, scarlet fever or any of these similar ailments is passed, there must follow a period of reconstruction. If the damage has been slight as a result of a light storm or an unusually strong structure, the reconstructive process places little demand on the resources of the individual. But if the storm has been unusually severe and the structure ill-prepared to meet its fury, the rebuilding process is certain to be long and laborious. Deficiency in the quality of the blood is one of the greatest handicaps at this time, and the clinician should recognize this as one of the most important indications for therapeutic assistance.

The action of Pepto-Mangan (Gude) is always very marked in these cases, and it is interesting to note how rapidly children respond to its upbuilding influence. A marked increase in hemoglobin at once follows its use and the red cells multiply rapidly. With improvement in the blood constituents there is a corresponding increase in the whole bodily tone, and it only takes a few days to carry the average patient safely away from the danger of a trying period.

Pepto-Mangan (Gude) is therefore a very valuable tonic in childhood, and unlike so many of the ordinary hematinics it can be given with impunity to the youngest infant. It has marked alterative properties, and in strumous or marasmic conditions it is especially valuable. It is absorbed rapidly, and is never rejected by even the weakest stomach.

In early life its administration is best effected by giving it in milk, and the dose should range from ten drops to two teaspoonfuls, depending, of course, on the age of the patient.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

### SOME OF THE EFFECTS OF HIGH ARTERIAL TENSION UPON SOME OF THE TISSUES OF THE EYE.\*

BY WM. CHEATHAM, M. D.,  
LOUISVILLE, KY.

BLOOD PRESSURE in the human body is, as we all know, not the same all the time. Age, sex, occupation, condition of the nervous system, especially the mental condition, are a few of the causes of this irregularity. In the healthy young adult the systolic physiological limit may vary from 100 to 140 m.m., and the diastolic between 80 and 90 m.m. Both decrease in children and increase in the old; this can be demonstrated by the sphygmomanometer. Clinically hypertension is of greater importance and frequency than hypotension. Recurring hemorrhages in the eye-lids and subconjunctival tissue should always excite suspicion.

There is but very little of this paper original, the greater part of it being extractions from a paper read by Dr. G. E. deSchweinitz, of Philadelphia, at a meeting of the American Ophthalmological Society in New York in 1906. My apology for this extensive padding is that Dr. deSchweinitz can write more entertainingly than I, and that the subject just now should be one of great interest

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\* Read before the Louisville Clinical Society, March 19, 1907.

and that the paper written by Dr. deSchweinitz and published in the transactions of the American Ophthalmological Society has probably not been seen by any other member of this Society, excepting possibly one or two.

The eyeground lesions of persistent high arterial tension, when this is a symptom of arterio-sclerosis, may conveniently be divided into those which are *suggestive* and those which are *pathognomonic*.

The suggestive signs include uneven caliber and undue tortuosity of the retinal arteries, increased distinctness of the central light streak, an unusually light color of the breadth of the artery, and alterations in the course and caliber of the veins.

The pathognomonic signs include changes in the size and breadth of the retinal arteries, of such character that a beaded appearance is produced, distinct loss of translucency; decided lesions in the arterial walls, consisting of white stripes in the form of perivasculitis; alternate contractions and dilatations of the veins, and particularly, and this is the most important of the signs, indentation of the veins by the stiffened arteries in the same manner as a solid rod would indent a rubber tube when lying across it. Sometimes the vein is simply flattened slightly at the point of crossing, or merely pushed aside, or its caliber is contracted, so that beyond the point of crossing there is an ampulliform dilatation. In addition to these well-known signs, there may be changes in the venous walls, so that they are bordered with white stripes, and the veins may be exceedingly tortuous and contain varicosities. Finally, there are œdema of the retina in the form of gray opacity around the disc or following the course of the vessels, hemorrhages manifesting themselves as linear extravasations, or roundish infiltrations, or sometimes assuming a drop-like form.

1. *The Age at Which These Signs may Occur.* As Mr. Marcus Gunn<sup>1</sup> has well said, and we are much indebted to him for the best study of this subject, old age alone does not produce these changes. All can substantiate his

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<sup>1</sup> Trans. Ophth. Soc. U. K. xviii, 1898.

statement that perfectly healthy retinal vessels are often seen in persons who have reached old age, even seventy or eighty years of life. Doubtless the visible changes, again to quote Mr. Gunn, usually begin between forty or fifty. I have seen them, however, at an earlier age, one of the most pronounced examples being a man aged 37. In other words, if the cause of persistent high arterial tension is sufficiently prolonged, these alterations will occur at any age at which the pathological condition to excite them arises.

2. *The Earliest Indications.* As has been stated in the beginning of this communication, certain of these signs are only suggestive, and they have already been enumerated and must not be disregarded if they are associated with other symptoms of the disease. According to my experience, three signs may be seen very early, as follows:

(a) A markedly corkscrew appearance of certain arterial twigs, either of those which skirt the macula, or, more significantly, of one or more small branches which arise from the largest vessels of the main distribution, which themselves are apparently normal. In other words, and this has been noted many times before and is also referred to by Mr. Gunn, the whole artery is not affected. This is a particularly striking feature if, as is frequently the case, a single twig decends vertically from a transverse branch and assumes this corkscrew condition.

(b) A flattening of a vein where it is in contact with an artery, and at this spot it has somewhat the appearance that a strap would have if laid across a solid tube, provided the vein passes over the artery. If the artery passes over the vein, the appearance is analogous to that which would be produced if the strap were placed across the lower surface of the tube. The vein is only slightly compressed at this stage, but is not yet indented sufficiently to produce an ampulliform dilatation of the vein beyond the point of crossing. It has seemed to me that this appearance is a little more frequently in the inferior temporal retinal vessel distribution than elsewhere, or perhaps, to speak more accurately, appears there first.

(c) The nerve-head has an appearance often loosely described as "congested." But this appearance differs from that presented by the so-called streaked hyperopic disc; it is unlike the flannel-red surface of the papilla which merges into an equally flannel-red eyeground, so commonly the result of prolonged eye-strain, exposure to bright light and intense heat, or seen in certain constitutional conditions; and, finally, may be distinguished from the early stage of neuritis, with the somewhat juicy red aspect of the disc. It is a dull red appearance which is presented and differs somewhat from the franker congestions, as the unhealthy flush of a cheek differs from the brighter color of a normal blush. Subsequently the later signs develop: marked indentation of veins, with ampulliform dilatation beyond the point of pressure; varicosities, "silver-wire" arteries and perivasculitis, hemorrhages, etc.

3. *Significance of the Signs.* The facts just detailed and the appearances described are well known, and hence we may consider them immediately from the *diagnostic standpoint*. It is undoubted that these retinal vessel changes have not merely a local significance; but are one of the important indications of that condition to which the term arterio-sclerosis is usually given.

As Alfred Stengel<sup>1</sup> has well said, "Arterio-sclerosis in its fully developed stage can be recognized with no great difficulty in most instances, but a positive determination of the existence of the earlier stages is extremely difficult, but most essential, if we are to accomplish anything in the way of controlling the progress of the disease." Hence we welcome aid from all sources.

It is not the province of the present paper to discuss the causes which lead to arterio-sclerosis—laborious work, nervous strain, abuse of alcohol, overfeeding, infectious diseases, notably syphilis, certain metallic poisonings, and heredity.

We are concerned here with its early recognition, and particularly with the help which ocular examination can give us in this respect. The general clinician interests him-

<sup>1</sup> American Medicine, January 2, 1904.



self especially for the purpose of diagnosis, to quote from Stengel's analysis, with a study of the pulse by palpation, with the character of the first heart sound at the apex and the second sound at the aortic area, with the sphygmogram, and with the results obtained by instrumental measurement of arterial tension.

To the four diagnostic indices of the persisting high arterial tension<sup>1</sup> as an early condition of arterio-sclerosis, namely, the condition of the pulse, the character of the heart sounds, the tracings on the sphygmogram, and the readings of the sphygmanometer, it would seem, on the authority of the studies made by Preston, Friedenwald, Hirschberg, Gunn, Raehlmann, Bull, Alleman, Woodruff, myself, and others, that the ophthalmoscopic signs already detailed should be added.

That this important aid has not escaped the attention of general clinicians is evident from what follows. Thus Stengel<sup>2</sup> writes: "The ophthalmoscope may reveal the positive evidences of vascular disease before the disease (arterio-sclerosis) has become marked." And again,<sup>3</sup> "Finally, I wish to call attention to the possibility of an early diagnosis by ophthalmoscopic examination."

But the value of the ophthalmoscope does not end here. To elucidate what is meant I quote once more from Stengel: "If the four symptoms I have named (the condition of the pulse, the character of the heart sounds, the increased tidal wave on the sphygmogram, and the elevation of tension recorded by the sphygmanometer) were found in arterio-sclerosis *alone*, the problem of diagnosis would be greatly simplified, but this is not the case. There are numerous and varied conditions of the system, organic and nervous in origin, that elevate pressure nearly constantly, and in which arterio-sclerosis has no part, except, perhaps, as a consequence. Any one of these conditions may occasion the four signs I have discussed."

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<sup>1</sup> It is possible that in the very early stages of arterio-sclerosis the blood pressure may be lowered instead of raised, but, as Stengel points out, such preliminary lowering of blood pressure is probably quite temporary and rather occasional than constant during the brief period of its existence.

<sup>2</sup> Pennsylvania Medical Journal, August, 1904.

<sup>3</sup> American Medicine, vol. II, No. 1, p. 191, 1904.

So far as I am aware, the ophthalmoscopic signs which have been detailed are produced by no other condition except the persisting high arterial tension of arterio-sclerosis, and therefore eyeground examination is of paramount importance in the early recognition of vascular disease, and may render signal aid in the interpretation of symptoms caused by the derangement of the functions of important organs, which in their turn are dependent upon sclerotic changes in their smaller vessels, although there is as yet no decided alteration in the general circulation.

But does the ophthalmoscope at this early stage show the lesions which have been reported? In so far as the early stages of arterio-sclerosis of the so-called cerebral type are concerned I believe it does, and believe, moreover, that it is not alone with these types that the retinal lesions are found. Of course sometimes examination is negative, and it would require a large amount of research and careful ophthalmoscopic examination in connection with clinical investigation, and also, when opportunity afforded, with post-mortem examination, accurately to determine the comparative frequency of retinal changes in the various groups of arterio-sclerosis exclusive of the cerebral types. Evidently, however, the ophthalmoscopic examination should never be omitted as part of the investigation of any suspected case of early arterio-sclerosis, and if indented veins and other ocular signs are present, then its findings are positive and, in a certain sense, more valuable than the four symptoms now so many times described. Certainly we may say with Marcus Gunn<sup>1</sup> "ophthalmoscopic examination is one of the most ready clinical means for the early detection of important arterial changes," and I think we may go further and say if the findings are positive they are diagnostic.

1. *The Hemorrhages and Their Results.* These naturally depend upon the size and situation of the extravasations, which if small and scattered may not at all or only slightly interfere with vision, while if they are large and centrally placed they greatly disturb direct vision. But we

<sup>1</sup> Trans. Ophth. Soc., U. K., xviii, 1898.

know their mischief-making qualities do not end here, as they may (a) break through the hyaloid and invade the vitreous (vitreous hemorrhages); (b) result in proliferating retinitis; (c) cause glaucoma, and (d) if extensive, detach the retina and create a loss of function in such areas of the retina which are deprived of nutrition by their presence and the diseased vessel from which they have proceeded.

In illustration of some of these complications the following cases may be quoted:

Case 1. *Large subhyaloid hemorrhage bursting in the vitreous; complete recovery.* She has led the most careful life and the vascular tension has been kept normal with suitable remedies and dietetic measures. Left eye lost; right eye saved.

Case 2. *Sclerosis of the retinal vessels; retinal hemorrhages; obstruction of the upper temporal artery; later typical proliferating retinitis.* Mr. M. H., aged 55. In the right eye, while now and then a small hemorrhage has appeared, and while the evident arterio-sclerosis and indenting of the veins are most marked, there has been no large extravasation and vision has remained normal. The case has been a triumph, in so far as the right eye is concerned, of careful systematic treatment, chiefly with iodides and nitroglycerin. The arterial tension in this case is notable. The systolic pressure has been as high as 190 and the diastolic 140. It has been influenced by remedies so as to go as low as 160 systolic, and 125 diastolic.

Case 3. *Retinal hemorrhage; right eye glaucoma passing into absolute glaucoma.* Miss E. K., of gouty ancestry and gouty habit, with albuminuria and occasional attacks of hematuria, one month prior to her examination became conscious of dim vision of the right eye. The left eye has retained its normal vision and there never have been hemorrhages in it, although the well marked early signs of arterio-sclerosis are present. The treatment has been systematic and careful since the attack of glaucoma.

Two other ocular conditions deserve mention in con-

nection with the present discussion, and these are referred to especially by Mr. Marcus Gunn in his well-known paper.

He points out that in certain cases of retrobulbar neuritis irregularity in the caliber of the retinal artery may be observed, and suggests that the small artery which passes from the central artery of the retina and supplies the axial fibers of the optic nerve may be subject to such a degeneration and therefore create disturbance in the nutrition of the axial fibers and the symptoms of a retro-ocular neuritis.

He has also noted, as must all of us, the frequency with which lenticular opacities appear in eyes the retinal arteries of which show the signs of degeneration that have been observed, and suggests that the ciliary arteries may be similarly affected and therefore the nutrition of the lens suffer.

Reference has already been made to the association of glaucoma with retinal hemorrhages, and, as Mr. Gunn points out, it is not improbable that arterial degeneration of this character may be responsible for the so-called hemorrhagic forms of this disease. Another point worth mentioning in connection with the prognosis is that high grades of arterial degeneration of glaucoma, as one frequently sees them, particularly silver-wire arteries and indented veins, would render the prognosis of operative interference unfavorable, and it is not improbable that they may be responsible for the hemorrhages and other complications which have occurred after well placed iridec-tomies in conditions of this kind.

I come now to refer to a matter which has interested me very much, and which all of us must have seen many times, namely, a *persisting asthenopia* in patients, frequently women, in the late forties, after presbyopia has been established or is already well marked, an asthenopia which yields not to optical therapeutics. Often these patients present the ordinary symptoms of neurasthenia, which in their turn are unquestionably the outcome of a general arterio-sclerosis, and I have found that the asthenopia not infrequently disappears, or is materially modi-

fied, if high arterial tension is reduced to the normal by means of proper dietetic measures, and particularly by the use of nitroglycerin.

We come, finally, to take up the question of a *general prognosis*, and the most important relationship is, to use the words of Mr. Gunn, the intimate connection between these ophthalmoscopic changes and the later evidences of cerebral valcular disease. Any one going over his case books would surely find, as Mr. Gunn has, a number of cases which have, within comparatively short periods after discovery of these retinal vessel changes, suffered from cerebral apoplexy, and the paper need not be burdened with case histories, although many examples have occurred in my practice. But these retinal vessel changes are not only indicative of arterio-sclerosis and especially of endarterial disease in the cerebrum, but are most interesting in the study of chronic nephritis and are important from the diagnostic standpoint, because, as has been well stated they are often obvious in cases in which the usual retinitis has not developed. In other words, they are part of the symptomatology of arterio-sclerosis, which may be associated with or eventuate in renal sclerosis, and as clinicians of note have stated that fully ninety per cent of the cases of chronic interstitial nephritis are primarily arterial in causation, this relationship becomes the more important. Furthermore, these retinal vessel changes may be evident where the usual retinitis may not supervene, because they are significant of a process which may terminate fatally before the development of a full established nephritis.

I come finally to say a word in regard to the duty of the ophthalmologist when he discovers, as he not infrequently does, the early signs of arterial degeneration in the retinal vessels, notably, the *first indications* which have already been described. Many of these patients are entirely unconscious of the state of their vessels, and often, indeed, they are without symptoms or discomfort. We see these patients when they come for presbyopic correction, or for alteration of glasses; we find the lesions, in



other words, casually. Naturally, I do not refer to advanced cases, with hemorrhages, exudates and grave visual disturbances, but to the early lesions, beginning increase in the light-streak and flattening or indentation of underlying veins by rigid arteries. If a patient presents himself with a retinal hemorrhage, or an exudate, or a retinitis, we promptly have him thoroughly examined. How often do we see these early changes and say nothing more about it? To illustrate what I mean I will quote two cases:

Case 1. Mrs. H., aged 58, presented herself on the 21st of November, 1905, for the purpose of having her refractive error corrected, having no other symptoms except some inconvenience in reading. After the correction of a moderate hypermetropic astigmatism, vision rose to 6/5 sharp; with the proper sphericals added the reading point was normal. The media were clear, the retinas free from hemorrhage, but there were well marked signs of beginning arterial sclerosis, the pressure on the veins being most marked, as I think it usually is, in the inferior distribution. One month later the patient began to suffer from slight indigestion, so-called, and again a month later presented herself because of a blur before the left eye. There were now, in addition to the signs already described, large hemorrhages in the inferior portion of the eyeground and small round and dotted hemorrhages scattered elsewhere. A few small hemorrhages were also found in the right eye. The veins were more irregular than at the last visit and their indentation greater. The systolic pressure was 190, the diastolic 130. The urine contained the following ingredients: A slight amount of albumin and a few hyalin casts.

She was immediately placed at rest and the usual treatment instituted, with marked improvement at the end of three months.

The question which I have often asked myself is if I had measured her arterial pressure at the time she was in my office, or caused it to be measured for me, and had I instituted treatment immediately to reduce the high arterial tension, would she not in all probability have been

spared the retinal hemorrhages which subsequently appeared? And yet there was nothing in the eyeground, other than a slight indentation of the veins, and she had no symptom of discomfort.

A second case is even more striking.

Mr. L., aged 48, the principal of an important school, applied for a change in glasses which he had been wearing for about three years. Vision was perfectly normal after the correction of a hypermetropic astigmatism, and suitable presbyopic lenses were given. It was noticed that the veins were somewhat uneven and distinctly pressed upon, and there was a little brick-red congestion of each disc. The patient was apparently in perfect health, and had no thought of doing anything except the arduous work which his duties entailed. Within two weeks after his visit, he was suddenly seized in the night with a large cerebral apoplexy, and died without returning to consciousness.

Again, except for a little indentation of the veins, there was nothing to indicate any elaborate general examination, and yet, had the arterial tension been measured, and had the man been taken from his active and arduous duties and at once been placed on a rigorous dietetic and medicinal regimen, is it not likely that the apoplexy might have been averted?

It is not necessary to elaborate this side of the discussion by the recitation of more case histories. Evidently the plain duty of the oculist is to search carefully throughout the eyegrounds of his middle-aged patients for any indications of sclerosis of the retinal vessels, and if they are present, even though the patient may be unconscious of any signs of arterio-sclerosis, he should be recommended to thorough general examination and notably to such which includes estimation of the systolic and diastolic blood pressures. If the eyeground examinations are confirmed, suitable treatment may prevent disastrous general consequences, and perhaps, the serious ocular lesions which later might otherwise arise. It should not be forgotten that where ophthalmoscopic examination reveals positive

signs of sclerosis of the retinal vessels, these assume, with comparatively few exceptions, a position of diagnostic importance in the study of arterio-sclerosis which equals, if it does not exceed, certainly in so far as cerebral arterio-sclerosis is concerned, that furnished by the four important clinical symptoms of the disease. Hence the necessity of ophthalmoscopic examination in the study of any set of obscure symptoms which may be connected with early arterio-sclerosis.

I wish to report a case I first saw February 2, 1907. W. M. S., policeman, aged 43; sight began to fail four or five years ago. V. R. E. =  $\frac{20}{70}$  V. L. eye =  $\frac{20}{100}$ . He smokes and drinks considerably; small hemorrhages temporal side of optic nerve; veins invisible and compressed by arteries at their crossings; some few small arteries corkscrew; syphilis denied, although his physician reports that his wife has *tabes dorsalis*.

This patient was given strychnia nitrate in increasing doses hypodermatically, with pot. iod. internally in increasing doses. He promised to cut off his stimulants and tobacco, which I am sure he did not do. I discharged him March 6th with vision about perfect. The hemorrhages had disappeared. The appearance of the retinal vessels were about the same. He was to continue under Dr. Brennan's care. Dr. Brennan reported that lungs and abdominal viscera were all right. The kidneys showed no trouble in two examinations. He had marked arterio-sclerosis with a slight enlargement of the left ventricle. He had had frequent attacks of diarrhœa, which Dr. B. attributed to his excessive drinking.

I am sure since reading Dr. deSchweinitz's article that we can now correctly account for many cases of asthenopia in elderly people the cause of which we did not know before, and can more than ever realize the importance of the ophthalmoscope in the arterial sclerosis and the effect of the persistent high blood pressure upon the whole body.

I do not believe that all of this patient's symptoms were from his arterio-sclerosis; they were certainly com-

plicated with the results of excessive use of alcohol and tobacco.

Another case, Mrs. A. M. H., age 62. Applied for glasses, saying her vision had failed rapidly lately. She is very fleshy; health not good. Is on her way to French Lick. V. each =  $\frac{15}{200}$ . Hemorrhages in each retina; no retinal changes except these. Dr. Flexner tells me that her blood pressure is 260 m.m., and that her urine contains albumin and casts.

Another case, Miss D., age 17. An ambitious girl; a hard student, whose eyes gave out on her some months ago. Homatropin shows she needs H.D.S. =  $|-50$  D.C. out 90c. each eye. These glasses have not relieved her. She has optic nerves and a condition of retinal vessels indicative of arterio-sclerosis at this early age. Her blood pressure is 128 m.m. She has been put on syr. iod. iron and nitroglycerin. I hope to report farther on this case soon.

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## THE IMPORTANCE OF MEDICAL RESEARCH TO THE PRACTICE OF MEDICINE.\*

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THE evolution of medicine is the history of an ancient art becoming transformed into a modern science. The earlier practitioners of medicine had for their guidance more or less imperfectly interpreted experience, hedged about and limited by vast systems of empiricism, and, though at intervals in this most interesting history some keen observers with acute powers of analysis crop out, it has been reserved for the last twenty-five or fifty years to introduce true methods of observation into the practice of medicine as we understand the phrase to-day. It is true that here and there through the preceding centuries vivisection and some forms of animal experiment were practiced, but the light gained was, while of great fundamental value, of more direct importance to anatomy and physiol-

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ogy than to clinical medicine. True experimental medicine, having for its first purpose the improvement in the diagnosis and treatment of the sick and with an eye direct to the prevention of disease in the individual and in the masses, is a creation of the last century, and I may add one of the most beneficent contributions to the welfare of mankind which this last wonderful century has to its credit. The idea not only still obtains among a class of so-called practical men, but is actually nursed and fostered by them, that the output of the great research laboratories in medicine has academic interest only, and, while this charge may be partly true, how long it will remain true and what isolated and apparently unimportant discovery of to-day may become the very nucleus of the most useful process and methods of to-morrow, no man can say. The history of all the sciences based on experiment and discovery abounds with numerous illustrations covering this point, but a concrete medical illustration may bring the matter closer to you, and I will be excused for reporting briefly the following case, because of its direct bearing on the subject in hand:

At a time some years since when blood examinations for malaria were much less in vogue than even now and when the malarial parasites were regarded as interesting microscopic objects, but of little general diagnostic use, a gentleman from the southern part of this State made his wedding journey to New York. The night after his arrival there and while at one of the larger hotels he was attacked by a severe abdominal pain, promptly followed by nausea and fever, and when the hotel doctor saw him early in the morning the pain had located itself in the right iliac region, and the attack was promptly pronounced an appendicitis. This diagnosis, without any more ado, was concurred in by one of the most prominent surgeons in New York, and immediate operation was urged. The young wife was advised by some local friends to seek further counsel before including an operation for appendicitis in her wedding itinerary, and had the elder Janeway and Dr. Bull see her husband in connection with the other



physicians. The temperature had by this time decidedly receded, and it was the opinion of the two last-named gentlemen that an examination of the blood should be made before any operation was done. The absence of any leucocytosis was at once evident, and a careful examination of the blood showed a typical estivo-autumnal infection. In the meantime the temperature and pain had again returned, but a few hypodermic injections of quinine promptly caused the disappearance of the whole train of symptoms and permitted the conclusion of the honeymoon in a much more orthodox and agreeable manner than had an unnecessary abdominal section been performed.

Dr. Osler years ago emphasized the great value which attaches to our ability positively to diagnose malaria on the one hand or as positively to exclude it on the other, and it is an undeniable fact that where men make careful examinations of the blood that obscure febrile processes are less often miscalled malaria, and valuable time is saved, and the unnecessary discomforts of the useless taking of quinine are spared their patients.

We hear frequently enough the value of quinine in the differential diagnosis of continued fevers, supposed to be either malarial or typhoid. I mention the matter only to condemn it as an unscientific proceeding. There are other fevers beside typhoid which prevail here and whose progress is not materially influenced by the thirty or sixty grains of quinine given in one or two days. I have seen septic processes of many sorts, pelvic abscess, tuberculosis, both pulmonary and general, and that fever which, for want of a better name, we call intestinal auto-intoxication, called and treated as typhoid because of the fallacy attaching to the so-called quinine test.

It may be profitable to review here what the laboratories have contributed that would do much to establish a prompt diagnosis in such conditions. A careful blood examination and a count of the leucocytes would promptly exclude or establish the diagnosis of malaria. The laboratory aids to the clinical diagnosis of typhoid are invaluable. We need not include here in these the Ehlich diazo-

reaction, which all admit is not infallible, but which may nevertheless be a valuable link in the chain. The Widal test is frequently ready for us when the patients consult us, especially if they have lingered around for a week or ten days, as they usually do. But a correct study of the blood by either one of a number of methods will promptly settle many possibilities of doubt at one time. By the method of Conrady, who uses a culture medium containing bile, positive colonies of typhoid bacilli are obtained as early as the third day of the disease. By Epstein's method, where glucose agar is used and a considerable quantity of the patient's own blood is added, typhoid colonies appear in the first twenty-four or thirty hours, and this test at once differentiates between typhoid and paratyphoid, because the latter ferments the glucose medium, while the former does not. At the same time that this is being done other media may be inoculated, and the presence or absence of other invading organisms may be elicited. The diagnostic value attaching to blood culture in general has in recent years received only in part the attention by the bulk of the profession to which the subject is entitled.

In addition to its being a ready means of determining finally the exact invading organism in many so-called septic conditions, it has changed the conception of both typhoid fever and pneumonia which has generally prevailed. Both of these are now regarded by advanced thinkers as general infections, the typhoid favoring the small intestine for its local manifestation, the pneumococcus attacking the lung and the serous membranes as the sites at which it does its most mischief.

The whole subject of the anemias has been worked ever since Ehrlich's studies of the reactions of the protoplasm and nuclei and granulations of the leucocytes to the aniline dyes. Not only have we a more intimate and correct knowledge of the disease processes themselves, but, by the use of the various staining methods, the progress of the case and proper prognoses may now be made in cases in which a few years ago an almost hopeless darkness pre-

ailed and neither patient nor physician accurately knew where they were. Again, the relations between certain forms of leucocytosis, as an eosinophilia and infection with certain intestinal parasites, such as the *uncinaria* and the *trichina*, has been established, and the recognition of the blood condition has directly led to correct diagnosis and successful treatment.

I may be permitted here to refer to the apparent relation which Herter has been able to show exists between certain cases of gas bacillus intestinal infection and pernicious anemia. In thirteen cases from the New York hospitals he has shown that in these so-called cases of pernicious anemia the study of the stools, which are spread and stained by the Gram method, the bacillus *aerogenes capsulatus* of Welch is practically the preponderating bacterium present. The colon bacillus and its allied forms are almost absent from his slides, which I had the opportunity of seeing in his private laboratory, and it is gratifying to add that treatment directed to the local condition is a valuable aid to the treatment in general use. Without the microscopic examination this form of infection cannot be recognized.

I can merely pay passing attention to the further scientific results which have followed the study of the function of the leucocyte. The work of Metchnikoff on phagocytosis, leading directly to Buchner and Ehrlich's studies of the principles of immunity contained in the blood serum, with its intricate and colossal literature, stand as illustrations of the great stimulus that a well-considered theory has for any science. I shall not stop long to point out the immensity of the results to medicine and humanity which have followed the application of the knowledge gained by experimental medicine in diphtheria, dysentery, bubonic plague, yellow fever, malaria, etc., or to point out the lives saved by advanced surgical and obstetric art. The figures stand out boldly and plainly, so that "he who runs may read;" and he who does not wish to read, who closes eyes and ears to these facts and figures, is beyond salvation by any words of mine.

We are facing now one of the most important phases of the studies on immunity which has yet been produced. I refer to Wright's studies on the opsonins. These are principles whose presence or absence from the blood serum determines the phagocytic success or failure of the leucocytes. Not only have we here a most valuable diagnostic aid in all forms of infection, but the results, in conservative hands, of treatment by bacterial vaccines along the lines suggested by Wright have been hitherto absolutely unattainable by any form of therapy in existence. That immunity to bacterial invasions could be secured by bacterial products has been known since Pasteur's time, but, as Ohlmacher, in a recent number of the *Journal of the American Medical Association*, has well said, "But, figuratively, it remained for Wright to so modify the vaccine of Pasteur as to arouse in the serum of Buchner a substance which prepared the disease-producing microbe for destruction by the phagocyte of Metchnikoff, thus bringing to practical humanitarian usefulness the laboriously-studied theories of three pioneers in biologic therapy." Ohlmacher's report includes vaccines from the staphylococci, colon bacillus pneumococcus, the gonococcus, and with Koch's newer tuberculin. These vaccines are prepared directly from the patient's own infecting organisms, and Wright's own experience contains remarkable results from even virulent streptococcus infection, as he personally informed me.

In closing his article on opsonic treatment Ohlmacher says that "he is prepared to assert that, with proper artificial autoinoculation, we can obtain constitutional and local improvement in many subacute and chronic infections entirely beyond anything previously possible in medicine. And I am personally assured that in these bacterial inoculations we possess therapeutic agents of a specificity and potency exceeding anything heretofore employed in the treatment of disease, except possibly the antitoxin of diphtheria."

The research work in connection with the pancreas, the adrenals, the thyroid and parathyroids, the pituitary

body, and the whole subject of the internal secretions of the ductless glands have been most fruitful, not only from the standpoint of pathology and physiology, but from the great benefit to scientific therapeutics a knowledge of the proper use of principles derived from these sources has been, I will not detail here. Our knowledge of diabetes, in consequence of the studies of Mering and Minkowski and the brilliant studies of Opie on the islands of Langerhans, Herter's work, and many others in this attractive field, would alone occupy more time than at our disposal. The more recent work of Bayless and Starling and Moore upon secretin, a body belonging to the class of secretion stimulants called the Holmones, is still sub judice, but the facts, if proved, will add another valuable resource to our therapy.

I may be permitted a brief reference to the studies of Thayer and McCallum on valvular heart lesions produced artificially in dogs. These experimenters have succeeded in reproducing artificially in dogs many of the valvular lesions commonly found in human beings, and so in demonstrating to their classes the local signs and sounds independent of the fortuitious presence of certain cases in their wards.

The work of Pawlow and his assistants on the digestive glands is epoch-making. Not only does it revolutionize all previous knowledge, but its positive teachings are of incalculable value in the actual treatment of gastric and intestinal disorders. He who reads aright these studies and gains the knowledge to be gained with the stomach tube and gastric analysis will walk surely where other men stumble and, incidentally, add less to the wealth of the makers of digestive elixirs and pepsin manufacturers by not prescribing the utterly absurd compounds and combinations which these people constantly keep before us.

The surgeons are even under greater debt to the research student than their medical brethren who do not practice surgery. Not only do their patients receive the benefits which accrue to the general practitioner, but modern surgery would not exist and a host of surgical pro-



cedures would not be possible but for the light from the laboratory, which blazed the way for the surgeon and has shown him the technique upon whose scientific application this success or failure depends. That Pasteur was the medical progenitor of Lister and Lister of Tate will scarcely be denied. Probably no more important document ever came from the prolific pen of Dr. Welch than his paper on the conditions underlying the infection of wounds; unless it be the one on the results of the use of the diphtheria antitoxin. The underlying principles of hand sterilization by the operator and his entire corps of assistants and the same careful preparation of the patient's skin were worked out in his and other laboratories, and the fallacies attaching to older methods were clearly shown. It matters not that the technique for this or that procedure has been changed or improved. Change in the direction of improvement is still possible and needed, but the successful and the conscientious operator of to-day will want to know wherefrom and why, and the appeal is not properly decided by the test upon the human subject, but must be left to laboratory methods in the end. The writings of Keen on the value to surgery of vivisection make good reading to this day, and are not only unanswerable arguments to the anti-vivisectionist, but demonstration of the great lessons surgery has learned from this form of medical research. The work of Crile on shock and Cushing on the relation of blood pressure in cerebral injuries and the importance of decompressing operations worked out by him and Frazier, and possibly others, have taught us valuable prophylactic and curable measures in conditions which were hopeless but a few years ago. The studies of Carrell and Guthrie and Halsted and Matas upon arterial and venous transplantation and anastomosis, as well as transplantation of organs from one subject to another, not only illustrate, but depend upon, a perfection of aseptic technique but recently attained, and open up possibilities to the surgeon of benefiting conditions which less than a decade ago were considered as hopeless as death itself. Carrell's discoveries with refer-

ence to the causes of adhesions after operations involving the peritoneum and its contained viscera are of vital importance to all surgeons doing this class of work. He has shown that the perfection of asepsis, the character of the ligature and its size, as well as the size of the needle, are much more intimately connected in causal relations with these post-operative complications than many of the other supposed causes.

Time will not permit more than a brief allusion to the activity which is going on in many research laboratories in the study of cancer and other malignant neoplasms. With much that has been learned as well as unlearned from these studies there remains yet much disputed ground and unexplored territory. But the work, not only in this great field, but in many others, goes bravely on, and that the harvest in the past is considered sufficient warrant for abundant confidence in the future crops the liberality of governments and philanthropists sufficiently attests.

This paper has become prolonged beyond my original intention and might yet be indefinitely extended. I am well aware that I have but skimmed a surface and done but faint justice to a most important subject—nay, *the most* important subject—before the profession, and especially the teaching part of our profession, to-day. These are times of changes and rearrangement. The standard of medical education and training is strangely variable in our country, but the inexorable demand of the profession itself and the laity also is that the standard of the lower be raised to the high standard of the universities in this country and abroad. A diploma from a Louisville school or university ought to carry the same weight that one from Harvard, Johns Hopkins, the University of Pennsylvania or Michigan, does. The great lack in our local teaching has for years been the absence of any feature resembling original research connected with it, and not only have the students and the teachers suffered from it, but much of our local professional practice lacks the scientific and initiative snap which well-equipped and productive laboratories of original research give the entire professional body where

they are located. How impossible it is for the generality of our local profession to carry into practice even the simpler diagnostic and therapeutic methods I have referred to is well known to you all.

That these conditions, in justice to ourselves and our patients, cannot last needs no prophetic vision to foretell. That the men into whose hands the future of medical teaching here will fall may read aright the signs of the times is my earnest hope. That they may be granted the wisdom and foresight in the rearrangements now taking place, to place our medical teaching upon the highest level, to establish here in connection with our hospitals and our colleges such laboratory facilities as our present exigencies require and the future progress of learning may demand is only the justice which the traditions of the past may well demand from the trustees of the future.

#### DISCUSSION.

DR. WEIDNER: I hardly think this paper is discussable in the ordinary sense of the word. I shall only comment on it and admire the elegant way in which he has brought it before the Society. I think our generation ought to be somewhat elated, and we ought to be proud of the progress that has been made in the last twenty-five years. I think the light has come and that the light will grow. There is no question about that. The work that has been done is but the rudimentary work and we may look for positive results in the next generation.

I shall only refer to one or two points that the doctor has made. The results of the examination of the blood has given us as much satisfaction as anything else, especially in the differentiation of malarial disease from typhoid fever and so on. He has entered more fully upon the subject than I care to go into it. This brings to my mind a case that I saw last year. One other doctor had visited the gentleman and he telephoned me that he wanted to consult with me regarding the case. The patient had repeated chills daily at about the same hour followed by a rapid rise of temperature and sweating. The doctor had given the patient quinine and he said that he suspected there was pus somewhere in the abdominal cavity. The liver was tender and the spleen large. We examined the blood and found the plasmodium present. I telephoned to the doctor to push the

quinine to sixty instead of thirty grains a day. Three or four doctors had seen the patient and diagnosed pus somewhere in the abdomen. The examination of the blood leaves much to be desired.

There are many factors that are misleading as to the leucocyte condition and it may not lead to a clear view of the case. Of course we know as a rule in all inflammatory conditions of the organs, acute inflammations, the disease can at least be differentiated from such conditions as might simulate it.

Unfortunately much of this work requires a great deal of time. It requires time to make examinations. I sometimes sit in my laboratory until eleven o'clock at night. I do this work with a good deal of satisfaction to myself and a great deal of benefit to my patients. For instance take the examination of Wright for the opsonic index. I have read the article that the doctor quoted. But it is practically almost impossible to do this work except in the hands of experts who have nothing else to do; it is almost impossible for the practitioner of medicine. It must be done by a man trained in pathological methods. It may not turn out to be what we are at the present time looking for. As you know Wright determines the amount of bacteria that are attracted to leucocyte. This may depend upon or be modified by conditions that we do not know of now. The whole subject is still in the most rudimentary condition. I hope by it we will be able to determine whether the patient is getting better or worse. This is practically the essence of the whole thing. It is very much in this respect as agglutination. Kocher looks upon agglutination as an evidence of immunity. There are others of the profession who claim that agglutination is increased at any time by the introduction, for instance of tuberculin, and they claim that it is simply due to the tuberculin. Some of the American authorities dispute this and claim that agglutination is an evidence of improvement. Of course this is such a recent thing that we have no evidence at command, especially in tuberculosis, more than in anything else. However, I think we ought to feel encouraged by the progress made.

Surgery has benefited in many ways more than medicine, and I agree with Dr. Flexner that medicine has gained a great deal, and we certainly have at our command means of making a diagnosis, and with the advanced study of immunity we also have better methods of handling our patients. From the surgical side we can take the chance.

I am surprised at what was done for the sick in the time of Hypocrated. The trephine was used at that time. Fractures and dislocations were treated to perfection. They had all the apparatus for the replacement of dislocated bones and so on. They knew a great deal and we must admire them greatly. Those men did no venesections and they did not perform operations on animals and they held no postmortems. We must admire their ingenuity and their originality. After that two thousand years passed without progress at all. The capillary circulation was demonstrated in 1868. So I think to-night we ought to be thankful for the work of Swanson, Virchow, (who I think was the greatest pathologist that ever lived) Pasteur and Koch. They had the technical means as the microscope had been perfected, and above all Koch deserves credit for the culture media he introduced which is one of the greatest advances of all of any time.

DR. MORRIS: I think the essayist selected a good subject for to-night, because it is one in which we are all interested, both the surgeon and the practitioner of medicine. I think a plea for a closer study of our patients applies to us all and appeals to us all. That is the basis of our success or non-success.

I think every practitioner of medicine ought to be acquainted with the microscope. He should be equipped with a microscope and he should be thoroughly able to use the microscope. I think every practitioner should be able to competently analyze the urine. I think we should be acquainted with urinalysis and be able to make a blood count and blood culture, and I believe it is in the reach of the practitioner to do these things, and if we would follow this up we would be better doctors and we would be better prepared to serve our patients than we are.

I think the line the doctor brought out to-night is an exceedingly important one to all of us.

DR. W. H. WATHEN: We are indebted to Dr. Flexner for the very scientific paper and at the same time practical paper he has given us this evening. It is in the right direction and the future progress in medicine and surgery must depend upon the study along this line. It applies equally to the physician and the surgeon. It applies to the diagnosis of disease and the treatment of disease by medicinal or surgical therapeutics.

During the last comparatively few years some parts of original research in its application to medicine and surgery have been remarkable in the hands of a few men. We take the re-



search work or the laboratory work that was done for us by Kussmal in kidney diseases by the application of cryoscopy, where he compares the freezing point of blood and of urine with the freezing point of distilled water, showing that the normal point of blood freezing is 56/100 of a centigrade under that of distilled water, and whenever you have a lower freezing point than that you have correspondingly lowered functional activity of the kidneys. And whenever we have a freezing point of the blood that is below 60/100 centigrade, if we operate, our patients invariably die. He claims that those surgeons who have operated on patients where the freezing point of the blood was below 60/100 centigrade and they recovered that their investigations had been incorrectly made. He claims that in over a thousand cases—probably now over twelve hundred—this test proved it conclusively to him, and the fact that other men have failed is because of some defect in their investigations.

Now, what Kussmal claims he is doing can be done by every man by the simplified methods and the improvement of instruments. The improvement of the different methods is certainly a wonderful advance in the surgery of the kidneys and probably in the medical treatment of the kidneys. We now know that in disease of the kidney it is seldom ever ascending and it is primarily nearly always in one kidney, and if we remove that kidney while the kidneys are functioning so well that the excrementory substances are thrown off so that the freezing point of the urine is not 60/100 of a degree centigrade below that of distilled water, and we operate and remove the diseased kidney the patient will get well. Then you ask which kidney is diseased? You determine this by another method, that of catheterizing the ureters which will indicate which kidney is diseased.

Now, we come to Wright. It seems that Wright has done more than any body else in determining the opsonic index. They are now working on this at Johns-Hopkins. They are working on it in New York and in Chicago. Up to this time we have not proven positive results in the treatment of tuberculosis or general tuberculosis or in the treatment of the local disease. We can cure lupus, a local tubercular disease, and I do not see why we cannot, by the proper use of the opsonic index, cure peritoneal tuberculosis following operations when removing the infected area. But coming to the acute diseases we have done comparatively nothing. Now, it is probable by further

investigation by pursuing this question persistently we may be able eventually to do a great deal in the acute infections. For instance we know that in peritoneal involvement we have to deal with the staphylococcus, streptococcus and colon bacillus more than with any other germs. That being true we may possibly finally be able to make a serum that may be injected into these patients after operation sufficiently early to increase the opsonic index so that the phagocytes will take up the germs and destroy them. Up to this time we know very little about what goes on in septicæmia proper where the germ has infected the entire system, and there are certain forms that we know will die it matters not what treatment we pursue. We do not know exactly the conditions that exist there and very probably we have an infection of intracellular bacteria where the toxine is mainly in the germ in a very insoluble condition so that this toxine that is found intracellularly does not stimulate the blood serum to form an additional opsonic substance to antagonize the bacteria so that the leucocytes or the phagocytes can destroy them. Now, it may be found that these intracellular bacteria or poisons may allow the germ to enter into the system everywhere and finally be absorbed without any increase in the opsonin or without any increase in the leucocytes so that death will result. These matters will have to be investigated very thoroughly in the future because we know nothing about them.

DR. J. R. WATHEN: I believe that Dr. Flexner has presented one of the most scientific papers read before a Society in Louisville for a long time. It certainly has been a resume of the whole field of modern work embracing especially physiology and pathology in their application to practical medicine and surgery. I was especially interested in his allusions to the work of Wright, and very lately I had the pleasure of watching the work of Dr. Cole for a few days. I saw his patient and watched when the examinations were made, and one thing that impressed me was the simplicity of the work done in comparison with the labored descriptions of other men. I believe Wright's work will extend and I believe it offers a great future, and I believe there is no better way of understanding this work than to actually see the patients with him as I had the pleasure of doing.

Now, as to the work in modern physiology I think a great deal of it is purely theoretical and many of the ideas I think are hardly ready to be accepted. I think the physiologists should go slow along those lines. We should eliminate the dif-

ficulties. Wright's methods have given result in a few diseases. There is a big field for original work.

Now, when it comes to bringing home to us the necessity of original work in Louisville, I cannot agree with Dr. Flexner on this line. I believe the work has been done and will always be done in the great centers where they have large endowment funds. It takes an immense amount of material to develop new ideas. In other words the large Eastern institutions are as the Eastern manufactures who take the raw material and work it up and send it out to us just as the cloth is sent to the tailor and we are to take the finished product and work it up in a practical way at the time. That was impressed upon me when I listened to the address of Dr.——. In some of the Eastern institutions they have millions and millions of dollars placed there for original research. It seems that the endowment is largely used for research work more than for the actual education of the medical students. In Louisville we need to spend this money for work more important. Let us build up the medical schools. Let us try if possible to start up a diagnostic laboratory in Louisville as in other cities. I am sorry that we have not such a laboratory in Louisville. Research work will come later. But we now need the commonest and simplest methods. I have a solution for that and I believe the solution is along this line. No surgeon has the time to do this work. Take my experience in perfecting the X-ray diagnosis along the line of kidney work. I have done this by much labor and the expenditure of a good deal of money and I have not the time to do the work for others. It is as much as I can do to do my own X-ray work. When other surgeons want this work done I have not the time as Dr. Weidner says to do this X-ray work. Now, if we could establish such a laboratory and get a competent man trained in the East and bring him here and all of us support this man, I believe we would accomplish much. And as I said to Dr. Flexner before the meeting I am willing to turn over all of my X-ray apparatus that is worth about two thousand dollars and take stock for half of what I paid for it. Let every man do the same thing. Let us subscribe for stock and start a laboratory. These men could be trained in the East and come back to Louisville showing the physicians here how to make examinations of the urine and the blood, and how to use the X-ray and the like and it would be of advantage to each one of us.

DR. ABELL: I wish to express my appreciation of Dr. Flex-

ner's review of the work that has been done and the forceful way in which he impresses on us the need of such work here in Louisville. If some solution could be made by which we could secure such a laboratory as mentioned by Dr. Wathen it would be of great advantage to our patients and to us. This laboratory is needed very badly, and possibly the presentation of the subject so forcibly by Dr. Flexner may be a stimulus toward the development of such a thing.

DR. ALLEN: This paper is especially interesting to me because I am interested in pathology, and I regard this as an unusually scientific and interesting paper. I feel that every surgeon and practitioner in Louisville ought to have heard it. I believe the intention of the paper is to stir up the idea of a correct diagnosis in which the practitioner or surgeon does not take the condition for granted and treat the symptomatology, but so far as possible he should make detailed research work and diagnose absolutely the condition he has to deal with.

I have been doing this work for some few men and I have found that, even with those who are very careful in making a special diagnosis, they take it for granted that a certain condition exists and treat the symptomatology without going into detail or putting themselves or any one else to any trouble as to making any research so as to bring out the diagnosis.

I remember a case—a surgical case—that was brought before my mind in which the patient had an osteomyelitis and he told me that three or four weeks before the breaking down and discharge of pus from the old sinus that he had malaria and the doctor gave him quinine and he took quinine badly. Of course this was all due to the absorption of the toxic material generated as a result of the infection and he was only having a hectic type of fever. I examined the blood and could not find the plasmodium malaria.

I believe that Dr. Flexner has started an interest in this work and I hope we shall see some results from it.

DR. FLEXNER (*closing*): I have little to add. I thank the gentlemen for their kindly reception of the paper. The purpose of the paper seems to have been pretty well accomplished.

In reference, however, to the subject of a laboratory, I want to say that I mean that the laboratory work in connection with the medical schools is the first and foremost step needed here. We do not want to be in the position of the tailor to the manufacturer; we want to weave some of the cloth ourselves. When

I state that a diploma from a Louisville school should equal that from any school I am not asking any more than the community should deserve. I do not think we ought to detail to some body else what we can do ourselves. There is no reason why a community of this size and growing as it is, and with wealth accumulating as it is, should be the borrowers in the field of knowledge and not producers there. It is a sad thing for me to say that in Louisville, which is a center of medical education, I do not recall one single contribution to medicine from all the teaching schools here. I do not recall one contribution to original medicine that has come from the profession here in this city. Louisville ought to be a medical center and a progressive center. We need not begin with great endowments here. We need to begin with some good man who can take the material here and use it. There are no medical schools that are teaching advanced medicine here. There are none that are doing any research work, and the fault with the medical schools is that they do not get some man who could produce some of this work right here.

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#### A NEWSPAPER REPORTER'S TRIP "TO THE LAND OF THE SKY."

**I**T was the first of June, 1906, and I had only been out of bed two months, and even now I can lean back in my Morris chair, close my eyes, and live over again the three months' period—January, February and March—in the infirmary, with typhoid fever. I can feel the awful solemn stillness, and can see and hear as in a dream, the white-capped nurses silently coming and going throughout the whole long, long day and night; and the regular visits of the patient, kindly and encouraging doctor. Somehow I always felt better after he came. His very presence seemed to do me as much good as his medicine. And then there was the weekly bunch of flowers from the boys. God bless them all! Nurses and doctors, dear old boys and all! And now I have been out of bed two months, and I am not good and strong yet. The managing editor, whom I have always regarded as a cold, heartless individual, noticing my pale face as I sat beside him in the office one day at work, put his arm affectionately on my shoulders and said, "George, my boy, you need a holiday; you must go to the mountains, the North Carolina mountains. We will give you a month's holiday."

The mountains! The mountains! I had read and dreamed



of the mountains from my boyhood's earliest days, and this was really my opportunity. It seemed almost too good to be true. I felt just like pinching myself to see if I were awake. Circumstances favored me; the heated season was already here; summer was fast approaching. The time when the heat and dust and glare of the city streets would become well nigh intolerable.

The next two weeks I spent in a seventh heaven of delightful contemplation and preparation. Boy-like I planned it all out ahead of time. I first ascertained what railroad traversed this deservedly famed region to the best advantage. It proved to be the Southern. So I repaired to the local ticket office of the Southern, and obtained of the agent all the pictures, flaming posters, advertisements, etc., that they had (literature as they called it.) I next marked off all the stations and prospective stop-overs and all points of interest.

One large suit-case and a capacious hand-bag made up my entire baggage. Into these I packed a traveling suit, an ordinary business suit, some clothes suitable for mountain climbing, and the necessary linen, underclothing, handkerchiefs, toilet articles, etc., a box of good cigars, my revolver, my camera, pencils and writing pads, "Lock's Essay on the Human Understanding" and "Kant's Critique of Pure Reason" for study, a copy of Shelly and Keats for recreation, and my Oxford Bible for contemplation. I was ready. Finally the eventful day came. My train started at 7:30 p. m. Promptly at 7:00 I called a cab and emerged from my modest flat, carrying my heavy walking stick in my hand, immediately behind me came the porter with my suit-case and bag. I got into the cab and we rattled noisily over the cobble stones to the station. I paid the cabby, climbed aboard the sleeper, found my berth, disposed of my belongings, entered the smoking compartment, sunk back into the soft cushions, selected and lit a cigar. In a few minutes, the conductor called, "All aboard!" And my heart echoed, "All aboard for the mountains!"

The train slowly pulled out. Soon we had left the great city with its noise, smoke, dust and heat far behind. I raised the window slightly and drank in the fresh, cool, country air, laden with the scent of the hay-field, the song of the birds, and the fragrant perfume of the wild flowers along the road side. O! how I enjoyed it all! The sun slowly sank to rest, and twilight, that incomparable time came on. A solemn, sweet, quiet, restful period when all nature seems to rest! The lines of Gray's Elegy

in a Country Churchyard, flitted through my mind. Night had dropped her curtains before I knew it. I closed my window, lit a fresh cigar, and lapsed into a state of delightful reverie. I sat there content and smoked, and as the smoke thickened and curled and wreathed about my head, my troubles all seemed to be swallowed up in prospects. I was not the worst fellow in the world after all. I would do better; indeed, I would, and even at the worst, I had done as well as a man could with my equipment and in my environment, and with careful study and close application, I might yet become famous. In fact, I solemnly resolved to do so. And thus I dreamed, planned, mused and built air-castles.

Finally the porter came in to inquire if I wished my berth prepared. I hastily glanced at my watch; it was 12:00 o'clock. I now realized that I was tired and went to bed. When I awoke the next morning, the sun was shining brightly, and we were rapidly approaching Knoxville. I got up, dressed and prepared myself. In a few minutes we steamed into the noisy, bustling Knoxville station. Here I had a wait of an hour, and a change of trains; so I checked my baggage, strolled into the station dining-room, had a good breakfast, and started out to see some of the town. I walked through the main streets, purchased some fruit and magazines, and hurried back to the station in good time to catch my train, got aboard the Pullman, selected my seat, arranged my belongings, and we were off for Asheville.

The first few hours out of Knoxville there is nothing specially eventful. You pass Morristown, Tennessee, which is a considerable sized town, and is the place to change cars if you wish to invade this scenic country via the Johnson City and Linville roads. At about 1:30 I took my lunch. Shortly after that, the hills began to assume proportions that were quite pretentious; I laid my magazines aside and took notice, and then I heard a fellow-passenger say that we were approaching the region of the French Broad river. I at once sought a desirable seat, eager and expectant, for I had been told that the scenery along this river was extremely beautiful and artistic, and that it was the natural gateway to this land of wonders. So I was nearing my goal. Sure enough, in a little while we rounded a curve, and the French Broad river was before us. Shall I ever forget it! The beautiful, noisy, winding, hurrying, flashing, shimmering French Broad, with the mid-afternoon sun shining full upon it. Now it is calm and placid, again it is broken into whirls and eddies in-



numerable, by the shallow bed and projecting rocks. Here on the rapids it is broken and churned into a perfect fury of froth and foam, there it is pouring noisily over a great dam, like molten streams of liquid silver. It is full of scenic surprises; it is tortuous and winding in its course, which adds greatly to its charm. It is hemmed in for the most part on both sides by high and beautiful mountains, and along one of its banks, almost under the edge of the mountains, run the tracks of the Southern railway. It is never the same at two points, except that it is hurrying ever. It fixes the attention of the traveler, and holds him spell-bound, and he turns from it with a sigh of reluctance as the swiftly moving train leaves its banks for good.

Hot Springs, North Carolina, was the next point of interest, with its medicated springs and its natural hot mineral baths gushing right out of the ground—a place of deserved reputation. As I leaned out of the train window, I noticed the Mountaid Park Hotel, a commodious building, well located and beautifully equipped, and then my eyes wandered over the village and past it. The town of Hot Springs rests in the midst of a beautiful fertile valley, girt in on all sides by huge towering mountains, which seem like sentries guarding the beautiful valley below. The town is a noted health resort, and is situated on the banks of the French Broad river.

After leaving Hot Springs, it was a gradual but continuous up-hill climb, with tall verdure-clad mountains on every hand, and I was still lazily admiring it when a train official entered and awoke me by shouting, "Asheville!" I got off hastily, and found that I was stiff and tired, handed my grips to the porter, and took the trolley for the Battery Park Hotel. I got a room, rested, bathed, shaved, had a change of clothes and some fresh linen, and went down stairs for dinner. After my journey, it was truly a sumptuous repast. Dinner over, I repaired to the spacious corridors, lit a cigar and proceeded to leisurely inspect this magnificent hostelry. I went into the sun parlor (now lighted by electricity), enclosed in glass, with hard-wood floors; huge palms grouped about in nooks and corners, great deep, old-fashioned fire-places with brass andirons. I sat down in a comfortable chair near some palms, and just at that psychological moment, a young lady in the other end of the room at the piano, began Schubert's Serenade, and from that she went to Mendelssohn's Song without Words; next to Nevin's Narcissus, etc. I enjoyed it hugely. Next morning I was out on the porches early, enjoying the mag-



nificent views, and watching the morning mists unveil the mountain tops. The Battery Park is a superb hotel, magnificently equipped, situated high above the city itself even, in a small park. It is built on the Queen Anne style, and from the standpoint of architecture, is one of the city's chief ornaments. I made it my stopping place as long as I stayed in Asheville. There are two other superb hotels here, the Manor and Kenilworth Inn, and a host of small but excellent hotels and boarding houses. I made trips down into the city. It is a beautiful city, aside from its value and reputation as a health resort.

About two or three miles from Asheville is located Mr. G. W. Vanderbilt's palatial residence, Biltmore, and handsome estate of about one thousand acres. The estate is open for visitors on certain days. In the immediate vicinity of Asheville, there are drives, water-falls, noted scenic spots, and mountain trails innumerable. One could spend not days, but weeks, here profitably and enjoyably. Asheville is the geographical as well as the railroad center of this superb country. One should see this city first and then plan his side trips. The magnificently equipped Southern railway pierces this country in every direction, bringing the traveler within easy reach of all the wildest and most beautiful spots of this prolific region, and dotted all along the way, he will find comfortable and commodious quarters in the shape of hotels, inns, and boarding houses.



With Asheville as a starting point, there is the trip to the Waynesville and Murphy regions, which for wildness and



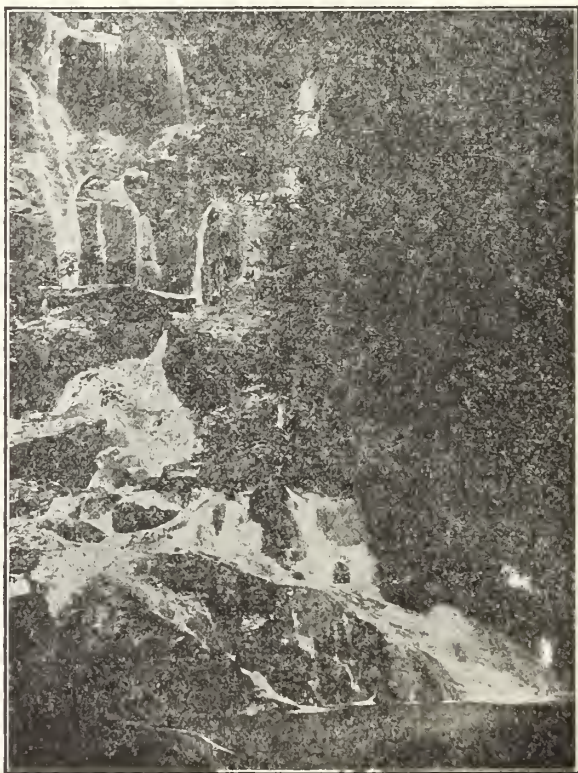
grandeur is said to be one of the most spectacular trips. Then there is the trip to the Blowing Rock country, via Hickory and Lenoir, and the trip to the Sapphire country, via Hendersonville, Brevard and Lake Toxaway; and lastly, we could retrace our steps, going back to Morristown, and thence to the famed Johnson City and Linville regions. I could not take them all, so I decided on Blowing Rock and Toxaway. Accordingly, one sunshiny afternoon found me again aboard the train, en route to Blowing Rock; we passed through a memorable panorama of mountain streams, gorges, cuts and mountain peaks. We laboriously pulled up one mountain side and ingloriously slid down the other with all brakes on. We arrived at Hickory after dark. Here we took a small "Jerk Water" train—not the Southern—which plies between Hickory and Lenoir, arriving at Lenoir late at night. Getting up early next morning, I looked over town a bit, and found that I must hire a vehicle to get to my destination; so by 10:00 a. m. I was ready to start. With my belongings in a light but strong surrey, two good horses and a negro driver, we started. In two or three hours, we had apparently left cities, towns, railroads, and even civilization, behind, and were passing on through the foot-hills to the goal—the very heart of the Blue Ridge mountains.

At noon we halted for a rest, fed our team, and ate our own meager lunch of bananas and cakes which we had procured at Lenoir. Again we pushed on, our road becoming wilder at every turn. Presently, John, the negro driver, pointed out a huge mountain peak, high above all the others, and with a considerable degree of pride, announced that "that was Old Grandfather Mountain." I noticed that we were continually going up. "John," said I, somewhat impatiently, "have we not reached the Blue Ridge yet?" "No sir," said he, "We have not reached the Blue Ridge yet."

Now as we turned a curve, I could see several enormous peaks poking their majestic heads through the cloud, from fifty to seventy-five miles away. Very soon the whole country all about me seemed to change; our horses were pulling in earnest now; we were climbing rapidly. I felt a sudden change come over me; I breathed full and deep—just drank it in; the balsamic odor of the long, or turpentine pines, mingled with the perfume of many wild flowers was wafted to my eager nostrils. Leaping, charging, hurrying little brooks were to be seen every now and then. Huge forest trees reached out on either side of

the narrow road, their branches interlacing and forming a perfect leafy canopy over our heads, through which the golden afternoon sunshine filtered in irregular spots and blotches. "John," said I, "I know we must be on the Blue Ridge now." "Yes sir," said he with a grin, "We is on the Blue Ridge now."

Our road became steeper and steeper, and more and more winding, and continually more beautiful. Every once in a while we would pass a mountaineer and his team, consisting of a heavy road wagon covered with white canvas, and drawn by two or four oxen, coming down the mountains. Now our view would be obstructed entirely by the mountain, over whose very side our road was constructed. A little while later, we just as suddenly came right out in the open, with a magnificent fertile valley far below us, and huge mountains in the distance. The views were becoming better and grander continually. We halted at one magnificent point to rest the horses a moment; I happened to look back, and counted my own road eight times, as it wound like a ribbon along the mountain range.



Soon the shadows grew long and twilight was upon us ; then night wrapped us in its inky blackness, and one by one the twinkling stars came peeping out. I got very cold, and there was some fog or mist present. We were now traveling on a level, and in a few minutes the twinkling lights of a little village became visible. We were at Blowing Rock, and my journey was ended.

Here, on a great table-land, forty-five hundred feet above the sea, is located the quaint little village of Blowing Rock. Far from the madding crowd, resting in the lap of the Blue Ridge mountains ; far from the hum of machinery, the whirl of electricity and the rattle of the train—at the highest point of, and in the heart of the Blue Ridge mountains, in a spot that is indescribably wild and grand. Around it are to be found the tallest mountains in the Appalachian system, and the waters from its innumerable sparkling springs, find their way in one instance into the Atlantic ocean, and in the other into the Gulf of Mexico.

One glorious and memorable morning, I strolled out to the edge of this table-land. Just here was situated a tiny hotel, with two little porches in front, called the "Grand View Hotel." I advanced fifteen feet in front of this building to the very edge of the cliff, and at this point there burst upon my delighted vision a scene I shall never forget ; it would be rank presumption to even try to describe it to you ; neither the song of the poet, nor the brush of the artist, nor the silver tongue of the orator could give you any definite idea of it. Mere words seem useless and inadequate, it beggars description, and only God and that part of humanity which is immortal, namely the soul, could comprehend it. Standing here we can look down for a sheer drop of hundreds of feet, until your head reels and you become dizzy. There are small mountains, huge forests, wagon roads, mountain streams, fertile green fields stretching away in the distance, and far out where the valley broadens in a pocket of the mountains, we can just distinguish the outlines of a tiny peaceful village. In this beautiful and fascinating valley the sunshine seems to concentrate. "Happy Valley," I called it ; its floor is a sheet of living green, its walls, the everlasting mountains covered with forest trees and leaf-canopied declivities. Here and there and everywhere are rhododendrons, mountain laurel and azaleas, lending their beauty and fragrance to the picture. Then as we raise our eyes, we see the mountains, the grand, solemn, silent, glorious, incomparable mountains, as far out and as far around

as the eye can reach, range after range and peak after peak ; they seem almost to pierce the sky, and extend back until they are cut by the horizon, and the observer can hardly tell whether he is looking at mountain tops or sky. Here I stood for a long time, saying never a word, with my heart filled to bursting with an indescribable joy which was akin to pain. Here each sunrise is an inspiration, each day a divine revelation, and each sunset a benediction. Entranced, enthralled and wrapped in contemplation the words of the One Hundred and Twenty-first Psalm came into my mind : "*I will lift up mine eyes unto the hills from whence cometh my help !*" Morning and evening, as long as I remained at Blowing Rock, I visited this glorious and incomparable spot.

Every day I visited a new place, or saw a new wonder, or climbed a mountain peak, stopping at intervals to rest on some huge rock beside a clear cool spring, draped in running vines and surrounded by wild flowers. The days were passing on golden wings, and I was foot-sore and weary from mountain climbing, but my heart was light. I was feeling like my old self again, and was gaining flesh every day; I was as brown as a berry and had an appetite like a farm hand. I enjoyed the intercourse with the quaint mountain people hugely, and they seemed to be very much interested in me. Every night as I came in from my trips, they would tell me of some beautiful waterfall, or some view to visit next day. Even the nights were superb here. The mountains were spectral and ghost-like by moonlight and the very stars seemed to shine with added radiance. From this great elevation, the clouds interested me very much, both by day and by night. Sometimes they were below me and sometimes above me, and again a lofty mountain top would stick out above a cloud, apparently cut off from its base. They reminded me of Shelley's poem, "The Cloud" (one of my favorites).

#### THE CLOUD.

##### I.

"I bring fresh showers for the thirsting flowers  
From the seas and the streams ;  
I bear light shade for the leaves when laid  
In their noonday dreams.  
From my wings are shaken the dews that waken  
The sweet buds every one,  
When rocked to rest on their Mother's breast,  
As she dances about the sun.  
I wield the flail of the lashing hail,

And whiten the green plains under  
And then again I dissolve it in rain,  
And laugh as I pass in thunder.

## II.

I sift the snow on the mountains below,  
And their great pines groan aghast;  
And all the night 'tis my pillow white,  
While I sleep in the arms of the Blast.  
Sublime on the towers of my skyey bowers  
Lightning my pilot sits;  
In a cavern under is fettered the Thunder  
It struggles and howls at fits.  
Over earth and ocean with gentle motion  
The pilot is guiding me,  
Lured by the love of the Genii that move  
In the depths of the purple sea;  
Over the rills and the crags and the hills,  
Over the lakes and the plains,  
Wherever he dream under mountain or stream  
The Spirit he loves remains;  
And all the while bask in heaven's blue smile,  
Whilst he is dissolving in rains.

## III.

The sanguine Sunrise, with his meteor eyes,  
And his burning plumes outspread,  
Leaps on the back of my sailing rack,  
When the morning star shines dead;  
As on the jag of a mountain-crag  
Which an earthquake rocks and swings  
An eagle alit one moment may sit  
In the light of its golden wings.  
And, when Sunset may breathe from the lit sea beneath,  
Its ardors of rest and of love,  
And the crimson pall of eve may fall  
From the depth of heaven above,  
With wings folded I rest on my airy nest,  
As still as a brooding dove.

## IV.

That orb'd maiden with white fire laden  
Whom mortals call the Moon  
Glides glimmering o'er my fleece-like floor  
By the midnight breezes strewn;  
And wherever the beat of her unseen feet,  
Which only the angels hear,  
May have broken the woof, of my tent's thin roof,  
The Stars peep behind her and peer.  
And I laugh to see them whirl and flee  
Like a swarm of golden bees,  
When I widen the rent in my wind-built tent,—



Till the calm rivers, lakes, and seas,  
Like strips of the sky fallen through me on high,  
Are each paved with the moon and these.

## V.

I bind the Sun's throne with a burning zone,  
And the Moon's with a girdle of pearl;  
The volcanoes are dim and the stars reel and swim,  
When the Whirlwinds my banner unfurl.  
From cape to cape, with a bridge-like shape,  
Over a torrent sea,  
Sun-beam proof, I hang like a roof;  
The mountains its columns be.  
The triumphal arch through which I march,  
With hurricane, fire, and snow,  
When the powers of the air are chained to my chair,  
Is the million-colored bow;  
The Sphere-fire above its soft colors wove,  
While the moist Earth was laughing below.

## VI.

I am the daughter of Earth and Water,  
And the nursling of the sky;  
I pass through the pores of the ocean and shores,  
I change but I can not die.  
For after the rain, when with never a strain  
The pavilion of Heaven is bare,  
And the winds and sunbams with their convex gleams  
Build up the blue dome of air,  
I silently laugh at my own cenotaph,—  
And out of the caverns of rain,  
Like a child from the womb, like a ghost from the tomb,  
I arise, and unbuild it again."

"The dear old doctor at Blowing Rock used to talk to me a great deal. He said, "*Now you must not go away from here without making the trip to Grandfather Mountain; thees views are good, bnt Grandfather is just Paradise.*" So one morning early, I started out with a surrey and two good horses—the usual mode of travel for visitors in this region—for Grandfather. We took the turnpike, with a romantic Indian name, the "Yon-halossee" road, a beautiful road, smooth enough to play marbles on, even enough to trot the whole distance from Blowing Rock to Linville, twenty miles, if the horses could stand it. A superb mountain boulevard, and the villagers claim that famous tourists have said that this road is very much like some of the roads in the Swiss Alps. A beautiful flower-lined road, cut off from the very top of the mountains, with an ever changing wonderful panorama. Far below you on either hand, as far as the eye can

reach, is a vast expanse of valleys, gorges and mountain peaks. The interest never flags for an instant during the whole trip, but when you begin to climb Old Grandfather, even the most stolid of the party will break into involuntary exclamations of delight. From the time you first round one of the spurs which helps to form its base until you stand on top of the huge flat rock which forms its summit, the attention is fixed, and you are spell-bound—bewitched. Now we pass under one of the many big rocks—as large as a New York skyscraper—which sticks out on its side, and the summit disappears from view for a moment; again we dash out and the summit seems nearer and grander than ever. But it is even yet a long way off, and we must wind and climb some more, but we do not notice the flight of time here.

Finally, we have gone as far as our horses can go, and we turn them over to the driver; they are fed and rested for the return trip, and we proceed on foot. After considerable walking, we reach the base of the huge rock which caps the mountain summit, and there at its foot, in a great clump of magnificent odorous pines, we discover a small winding trail, constructed by the architect, Time, from the ruins of the ages, carpeted with soft pine needles and strewn with boulders of all shapes and sizes. Up, up, and ever upward, over this precipitous, narrow, steep, rock bound trail, where a mis-step might mean anything from a broken limb to a lost life, passing small trees, and mosses and lichens innumerable, and a very pretty peculiar plant, which the natives call "Mountain heather." We toiled until we finally reached the top of the mountain, and then we walked about on the top of this great rock. Now I understood why the faces of the stolid mountaineers always seemed to become wreathed in smiles when they spoke of Grandfather Mountain. Now I understood why the dear old Doctor thought Grandfather was Paradise. From the top of this wonderful mountain, over six thousand feet high and above the clouds, it seems to your excited mind as if you were looking down upon the whole universe. From this viewpoint we can count the mountain ranges by the dozen and the peaks by the hundred. Just to my left, apparently only a short distance away—really twenty-odd miles—is the little village of Blowing Rock, which I left so early this morning. It seemed so near that I felt as if I could stoop down, pick up one of the loose stones at my feet, and throw it into the town. And, again, out yonder lies my valley—"Happy Valley!" It has lost its outline, for I cannot

see it in detail; from this sublime point it has become only one of a number of valleys surrounded by towering mountain peaks. If I live to be a thousand, I could never forget this view. You feel alone—alone with God and the eternal, everlasting hills, and you cannot get rid of the feeling that you are on trial at the bar of God. The soul is awed and abashed in the presence of its Maker; the head is bowed over the breast, and tears steal silently down the cheeks; the scene is ended.

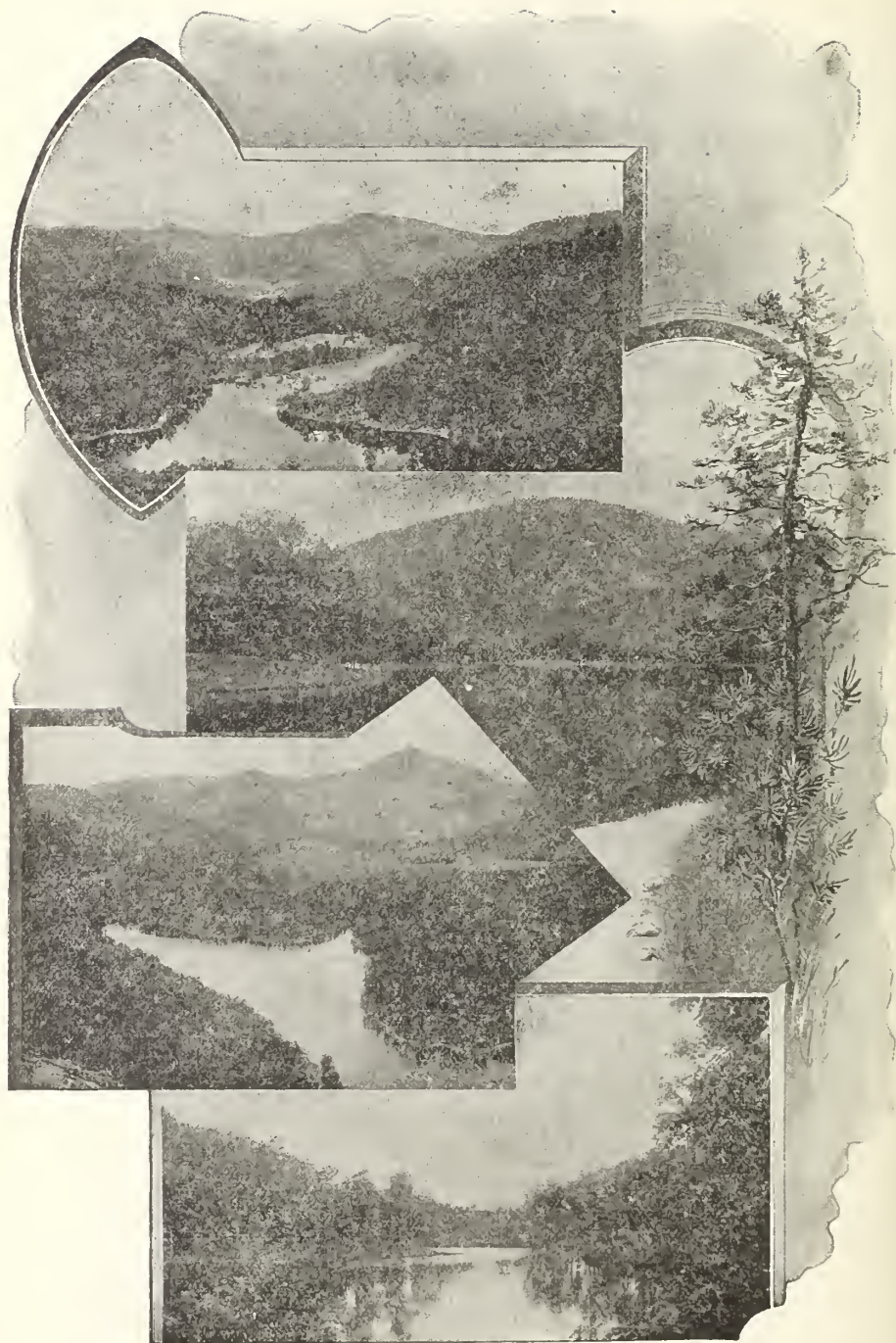
It was mid-afternoon before I knew it, so I hurriedly scrambled down the mountain-side and started back. The driver told me that bear and deer were occasionally seen here. We saw several large, beautiful pheasants. We arrived at Blowing Rock just in time for supper. Thus I spent my days, until I realized the fact that my time was growing short and I had not seen Toxaway yet; so I reluctantly turned my back on Blowing Rock and started down the Blue Ridge to Lenoir, from Lenoir to Hickory, thence via the Southern back to Asheville, arriving at Asheville about 3 P. M. I changed cars to the branch of the Southern which runs between Asheville and Toxaway. We started about 3:30. Twenty miles out from Asheville, on the main line, we came to Henderson, a noted health resort, situated on a plateau in the heart of the mountains. Within a day's drive of this place are some of the most noted scenic points in this region—namely, Tyron, Chimney Rock, Shaking Bald Mountain, Cæsar's Head, and dozens of others. Leaving the main line of the Southern at Hendersonville, our train passed through a beautiful and fertile region to the enterprising little town of Brevard, about twenty miles from Hendersonville. As we steamed away from Brevard I realized that we were rapidly approaching the Toxaway, or "Sapphire Country," as it is called. The hills were becoming taller, the evening shadows were lengthening, the sun had just disappeared behind the hills, and great bars of mellow, golden sunlight filtered through the niches in the hills and lit up the valleys below with the glorious radiance of a dying day. I watched the spectacle with an absorbing interest. Darkness came on, and presently our train began to puff and lunge and groan in that peculiar manner which meant that we were climbing again, up and up. I could smell the mountains in the very air, and my heart gave a great glad, joyous bound, for even in this short space of time I had learned to love the mountains, and I shall always love them as long as I live. Presently our train stopped at Lake Toxaway;

this was the terminus of the road. The porters took charge of my baggage and guided me across a bridge over an arm of the lake to the hotel, Toxaway Inn. I was tired and sleepy, and after eating supper went to bed. The charms of this beautiful sapphire country are many and varied. At this delightful spot man has done his best to embellish and enhance a district which God has already endowed with such a lavish hand, and the result must be seen to be appreciated, for it can neither be described nor imagined.

A perfect gem of a lake, hundreds of feet above the level of the sea in the heart of the mountains, a lake that is as clear and pure and blue as a sapphire itself; a lake that has fifteen miles of shore line, with great forest trees, verdure and wild flowers coming down to the very water's edge, like a beautiful carpet; a lake with innumerable arms and inlets, and landing places everywhere, with tiny paths which seem to silently but all the more enticingly invite you to leave your soft cushions and your skiff and wander among the ferns and flowers, on and on, past shady nooks and babbling brooks. Towering over this beautiful lake, and casting their shadows into its clear depths, are huge mountains, the most notable of which is Mount Toxaway, extending five thousand feet above the sea-level, grand, tall, and magnificent. On one arm of this lake is the superb Toxaway Inn, built of native woods, containing two hundred rooms, lighted by electricity, with hot and cold water, elegant table, a telegraph station, private baths, superb old-fashioned fireplaces, and long, beautiful porches—in fact, everything that could be desired. Opposite the hotel, on the lake-shore, is a large boat-house, with a regular flotilla of boats—anything that you desire, from an electric launch to a beautiful shapely canoe or row-boat.

Very frequently during those beautiful cloudless nights, when the moon was shining with a silvery radiance, I would slip down, get my boat, row out into the lake, pull in the oars, let my boat sway, arrange my cushions, light a cigar, and lean back and smoke and dream and enjoy it all, whilst over the waves there comes stealing to your entranced senses the beautiful music of the hotel orchestra, where the guests are dancing, but you would not change places with them. You are all alone—no, not alone, for you feel that Nature is with you, and peace is in your heart. Every morning I would be up and in my skiff at the first flush of dawn; I would row and watch the sun rise and see







the first golden bars kiss the hill-tops good morning, then slowly come down the mountain side and wake the birds, and lastly flood the valley with its liquid radiance, and gild the waters of my beloved lake. I took long morning rambles out in the woods, where the wild flowers were echoing yet with the bee-song and wet with the morning dew. Or I would row across to the outlet of the lake, tie my skiff and follow the water-falls down the mountain side a distance of 400 feet to the bed of the river below, and sit there and watch the falls for an hour at a time, and then, with a heart full of song and with an arm full wild flowers, I would return.

In connection with Toxaway Inn, there are good livery facilities, and visitors may ride or drive over beautiful and picturesque roads; good fishing and hunting are likewise to be had. One of the most beautiful all day trips is to drive over to Lake Sapphire and Lake Fairfield. With good horses and an early start, it is a superb trip between tall mountains and through forests primeval. The first stop is made to see "Horse Pasture Falls," and a beautiful sight it is, with a sheer drop of from 150 to 200 feet, its spray, its thundering noise, and its enormous volume of water. The next stop was to see "The Narrows." This name is applied to a considerable sized stream of water which has literally cut its way between two mountain spurs; it has been eating its way into the rocks for ages, and it writhes and twists, and boils and foams and leaps and behaves very much like the description of the cataract of Lodore. It is spanned by a quaint artistic bridge, and one may stand on this bridge and almost touch the bank on either side. The walls of this miniature canyon are studded with rocks and cliffs, and are covered with great trees, hanging vines, rhododendrons and wild flowers, all of which overhang and shade the rushing torrent below. In very truth The Narrows is one of the most natively picturesque and artistic spots on which my eyes have ever rested. (The Narrows, Horse Pasture Falls and Lake Toxaway so endeared themselves to me, that when I returned home I sent my camera films of them east, and had them enlarged and framed, and even now as I write they hang over my mantel in my room. In the center is a view of Lake Toxaway, with my skiff in the foreground, on the one side is the Narrows, on the other Horse Pasture Falls). A little further on we came to Lake Sapphire, a pretty lake and one of deserved repute, but not on so grand a scale as Lake Toxaway. The next point of

special importance was our stopping place, Lake Fairfield and the Fairfield Hotel.

The scene setting of the Lake Fairfield region is comparable to and very like in general outline, that of Toxoway, but it is on a somewhat smaller scale. Here there is a commodious hotel, the Fairfield Hotel, with an equipment equal to that of Toxaway Inn. A beautiful lake which offers boating, bathing and fishing facilities; superb mountains, glorious driveways, inviting and picturesque bridle paths, innumerable cascades, forests and wild flowers, and directly facing the hotel and at one end of the lake,



stands Bald Face Mountain, with its bare wall of smooth rock extending upward for some hundreds of feet, casting its shadows into the depths of the clear lake below. On the whole, I believe the Fairfield region is the more artistic if less massive than even

Toxaway itself. With Fairfield Hotel as a basis, the adventurous mountain climber may make trips of two or three days duration into mountain regions which are practically unknown, unexplored and unsung, far back into the Smoky Mountains of Eastern Tennessee, or he may with pack, mule and guide push through to the Murphy region; or he may make one of the innumerable short trips (the roads are all beautiful) such as the trip to Old Whitesides Mountain which towers into the air a distance of eighteen hundred feet. It is a magnificent sight and one to be remembered forever. It is the tallest mountain cliff in America east of the Rocky Mountains. And again there is the trip to the famous Whitewater Falls with its picturesque and romantic setting and its waterfall of nearly four hundred feet. And thus we might go on like "Tennyson's Brook," forever.

This beautiful sapphire country is an inexhaustible wonderland of scenic surprises of which the heart never wearies and the eye never tires. It is the sportman's Paradise, the hunting and fishing are unsurpassed. Here the writer may rest and be inspired; here the musician may compose receiving new harmonies from the song of the birds and the tinkle of the waterfalls; here the athlete may row and climb and revel in the clouds; here the invalid may rest and drink in new life and grow strong; here is beauty and peace and grandeur and rest and strength and health. This is indeed God's country.

One day I awoke to the fact that my time was up my holiday gone, so with a sigh of regret I packed my belongings took a farewell moonlight row and was up early next morning ready for the start, and through the sunbeams and trees from the rear platform of the last car I caught a final glimpse of my beloved Lake Toxaway. Down the mountains we hurried past the fertile valleys, past Brevard, past Hendersonville to the main line, thence to Asheville where we stopped. I went up into the city got a good lunch and was back at the station in time for the afternoon train. Swiftly we traveled down the mountains, soon we were at Hot Springs and on the beautiful French Broad again. The afternoon melted away all too quickly. The mountains grew more and more distant, the shadows deepened and night came on. I lit a cigar and half closed my eyes and lived it all over again. And now it was gone, no not gone, for its beauty, its grandeur and its inspiration was indelibly engraved on my very being. These memory pictures will exert a softening and a refining and an elevating influence on me as long as my soul shall last, and I resolved to go back again just as soon as I could afford it, and that when I became rich and famous I would spend every summer there, and you, my dear reader, will be impressed in the same way and will form the same resolution if you are ever sufficiently fortunate (which I hope God may grant) to see The Land of the Sky.

GEORGE MYCROFT.

THE  
American Practitioner and News.

"NEC TENUI PENNÂ."

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F. W. SAMUEL, A. M., M. D., SAMUEL B. HAYS, M. D.,	}	EDITORS.	O. P. NUCKOLS, M. D., Ph. G. MANAGING EDITOR.
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## Editorial.

*The Rhabdomyoma.* I am a little surprised that the text books devote so small a space to the skeletal muscle tumors; about all they have to say, is that they are quite rare and are generally malignant. The very fact of the infrequent occurrence should stimulate research and observation.

Those tumors that do come under our observation always show at least a tendency to malignant degeneration.

I can't see how we can rely very much on the parasitic theory as an etiological factor in the origin of neoplasms, for unless there is a germ or parasite that has a selective action for each separate tissue, it does seem to me that when we inoculate a tissue with tumor cells, that it would make no difference what character of cell made up the tumor growth, there would be stimulated a secondary tumor, the cellular elements of which would be of the type of the tissue inoculated irrespective of the cellular elements of the tumor inoculated from; for instance, if a cancer was transplanted in muscular tissue, we would have stimulated a muscular tissue tumor made up of muscle cells; of course the cancer cells would take on a



transplanted growth. Now as this is not the case, the muscle tissue inoculated with the cancer cell (of so called parasitic origin) does not take on a tumor growth, for there develops in the muscle only a cancer; now if this is the case, we have to fall back on old man Cohnheims theory and that of trauma, tearing cells from their relation and throwing them out of the evolutionary wave of development, or the theory of constant irritation to epithelia interfering with systematic governed karyokinesis, and cells stimulated to rapid division having lost their control governing force, manifest a marked tendency to retrogression reverting to their original embryonic prototype, and a cell is malignant according to its approach to embryonic tissue.

We must accept that embryonic cells left as superfluous, later in life are stimulated, that they have fallen out of the evolutionary wave, hence all energy is manifested in karyokinesis and tumor growth.

In relation to mesoblastic structures we find the primary growth a sarcoma. Now we can only account for a benign tumor undergoing malignant degeneration on the basis that rapid uncontrolled division permits reversion of cell type, for the cells are dividing before they reach maturity.

If we accept this, I believe that our striated muscle cell, as it nearer simulates sarcoma from a morphological standpoint, has the greatest tendency to retrogression in its growth, and that if we could observe the rhabdomyoma in its first efforts at tumor growth that we would always find a typical skeletal muscle cell tumor, but when we wait until the growth is of sufficient size to attract the patients attention, that this length of time is sufficient for it to have reverted to a higher form of embryonic tissue (the spindle cell sarcoma) and if left alone would eventually become a round cell sarcoma; the true morphological embryonic tissue then I believe that all rhabdomyoma begin as typical skeletal myoma and retrograde into a typical mesoblastic tumor or sarcoma.



NOTES AND PERSONALS.

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DR. W. H. WATHEN.

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At the meeting of the American Medical Association, which was held at Atlantic City, N. J., June 4-7, one of Kentucky's most distinguished physicians was again honored. Dr. W. H. Wathen, of Louisville, delivered the oration on Surgery. Dr. Wathen is easily one of the most distinguished physicians of the State, and a man of National reputation as a Gynecologist, and anything from his pen is received with the most profound interest by the profession at large. We not only congratulate the medical profession of Kentucky in being so ably represented, but the Association as well, in being the recipients of such an oration.

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THE MEDICAL ERA'S SPECIAL EDITION.

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The *Medical Era*, of St. Louis, Missouri, will conform to its usual custom and issue its yearly series of special Gastro-Intestinal numbers embracing July and August. The August issue will be given over entirely to the consideration of every phase of Typhoid Fever. The series will contain about thirty-five or forty practical papers and will contain a large amount of valuable information.

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DR. E. C. REGISTER'S NEW BOOK.

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"Practical Fever Nursing" will soon be issued from the presses of the W. B. Saunders Co., of Philadelphia. Dr. Register is well-known as the editor of the *Charlotte Medical Journal*, and as Professor of the Practice of Medicine in the North Carolina Medical College, at Charlotte, N. C. He is a widely traveled, well read, and a polished, dignified gentleman. He has always enjoyed a large and lucrative practice in his home city as well as in near-by towns and in adjoining States. From his varied and ripe experience in the profession the doctor is in a position to write authoritatively on the subject of "Fever Nursing."—*Gaillard's Southern Medicine*.

## Recent Progress in Medical Science.

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IN CHARGE OF

CHAS. W. HIBBITT, M. D.,

AND

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LOUISVILLE, KY.

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— GYNECOLOGY.

**A New Mode of Treatment for Inoperable Cancer of the Uterus by Means of Acetone.**—George Gellhorn (*The Journal of A. M. A.*). A rapid survey of the different methods of treatment for this class of cases, the writer claims shows that little progress has been made.

He claims that Lomer, who advises curetting and thermo-cauterizing the diseased area thoroughly and repeating it at intervals of four weeks, makes the soundest suggestion of recent years.

The writer claims the primary object is to reduce the weakening hemorrhages and to check the intolerable stench of the discharge. His treatment consist of the methodical application of acetone physically. Acetone is a transparent, colorless, mobile and volatile liquid of a characteristic ethereal order and a pungent sweetish taste. It has been used in laboratory for hardening tissues for microscopic examination. Tissues shrink rapidly in acetone and if left in fluid for half an hour are too hard for microtome knife. The writers idea is to harden the tissues thus rendering the malignant growth harmless.

He thoroughly cures the ulcerating area and after drying same with cotton sponges, pours one-half to one ounce of acetone into the wound through a tubular speculum, the pelvis of the patient must be raised in slight Trendelenburg's position and the patient left in this position for fifteen minutes, then the patient is lowered and acetone is allowed to run out, and a narrow strip of gauze soaked in acetone is packed in the cavity. This regular treatment without curetting and cauterization is given two or three times a week (without anæsthesia) and either at home or office. Care should be taken to prevent the acetone from running over the vulva or perineum.

This treatment checks any slight oozing instantly and the surface is covered with a thin whitest film.

A marked reduction of the intense order is noticed and the

discharge becomes more watery and gradually disappears. At the same time the hemorrhages fail to recur, and the walls of the wound cavity become smooth and firm. The patient gains strength and improves visibly.

**The Operative Treatment of Cancer of the Cervix Uteri.—**

Emil Ries (*The Journal A. M. A.*). The writer says with the experience of decades for a basis of investigation of the results of such operations, the disappointment of operators was brought by the following causes.

*First.*—Insufficient extent of the operation or leaving behind cancerous tissue which would continue to grow.

*Second.*—Contamination of the wound with cancer in the course of the operation, in other words grafting cancer into healthy tissue.

He says however promise of improvement depends on:

*First.*—That the cases must come early, hence the attempts at popular instruction and improved medical education.

*Second.*—The cases must be submitted to more extensive operations, hence the Schuchardt incision, removal of tissues adjacent to the uterus.

*Third.*—Contamination must be prevented, hence special technical methods.

In concluding he gives a few points which should help us in deciding on the type of operation to be selected.

(1) Every cancer which is not removed completely kills its bearer sooner or later.

(2) The more we follow up cancer along its irregular and incalculable course the greater the chance of removing it all.

(3) An incomplete operation does not save from death from cancer.

(4) It is worth while to risk a severe operation where the alternative is a lingering, often horribly painful and disgusting disease.

**The Stem Pessary for Amenorrhea and Dysmenorrhea.—**

J. H. Carstens, M. D., Detroit, (*Journal A. M. A.*, December 29, 1906). The writer contends that amenorrhea causes a great deal of mental distress to the patient, and often results in their resorting to various "patent medicines." He says in the larger number of these cases we have an infantile uterus, and in the older women it is called premature atrophy, and when amenorrhea occurs after childbirth or miscarriage it is due to superinvolution.

To relieve this the uterus which is a muscle must be exercised, and he says, to accomplish this he uses a stem pessary which irritates and causes the uterus to contract and thus it develops. Continuing he states dysmenorrhea from stenosis is only relieved for a few months by dilatation, but a stem pessary kept in long enough will give relief.

The cases which give most trouble are the ones where pelvic disease is present, no obstruction and no constitutional cause. Another class are those who have a normal menstruation for years (10 or 15), and then begin to have pain that gradually becomes unbearable. This condition he finds in the unmarried who are wage earners and whose occupation is intellectual.

On examination you find the cervix small, hard, and atrophic, and the muscularies supplanted by fibrous tissue.

He attributes this condition to non-use of the uterus; he says with a stem pessary he checks the process and restores the cervix to a normal condition.

The writer used the rubber (Chambers) pessary and is introduced after the cervix is dilated, and most cases require an anæsthetic.

He never takes out the stem under six months and rarely before one year.

The greatest precaution must be taken in not introducing it in cases where any inflammatory condition of the uterus tubes and ovaries are present. In conclusion he says:

(1) The stem pessary will generally cure amenorrhea when all other means have failed.

(2) It will develop an infantile uterus, enlarge a prematurely atrophied one, and restore a superinvolutional womb to a normal condition.

(3) It will cure most cases of intractable dysmenorrhea, when no special pathologic condition can be found.

(4) If worn for six months or a year it sometimes cures sterility.

(5) All inflammatory conditions about the pelvic organs must be rigidly excluded before it is used. The same aseptic precautions should be taken during its introduction as a surgeon would take with the most complicated case of abdominal surgery.

**Transplantation of the Round Ligament through a Median Incision, the best Operation for Retroversion.**—Emory Lanphear, M. D., (*Amer. Jour. of Surgery*, February, 1907). The writer explains that after making the usual incision in the med-

ian line two inches above the pubes, he introduces his finger and brings the round ligament up until it is taut, then as near the canal of nuck as is convenient a No. 2 plain cat-gut ligature is passed around it and tied, a hemostat is placed on the ligament about a half inch nearer the uterus, then the ligament is cut between the ligature and forceps and the outer end pushed back in pelvis. The ligament on the opposite side is treated in the same way.

A sharp pointed hemostat is then passed into the wound and pushed directly through the body of the rectus and the peritoneum an inch to the left of the incision, forceps then grasp the round ligament and pull it through the small hole in peritoneum and muscle. The opposite side treated in same way. Traction is now made on both ligaments until fundus is brought up near to the parietal peritoneum, then the round ligaments are stitched into rectus muscle by No. 2 10-day chromic cat-gut.

The peritoneum is not closed and the ends of the round ligaments are sown together with chromic cat-gut.

The sheath of the rectus is pulled over them and held in place by one or two cat-gut sutures.

The writer claims the advantages of this operation are :

- (1) Ease of performance.
- (2) Safety, if done under strict surgical precautions.
- (3) Perfect, permanent retention of the uterus and adnexia in natural position.
- (4) Non-interference with pregnancy.

**Should the Ovaries be Removed when Hysterectomy or Removal of the Body of the Uterus is Done.**—J. W. Bovie, Washington, D. C., (*Amer. Jour. of Obstetrics*, March). The writer says: (1) The existence of an ovarian secretion has not been proved and therefore should not act as a bar to oöphorectomy.

(2) In all cases of removal of the uterus or its body for disease in women of more than 40 years the ovaries would best be removed.

(3) As 5 per cent of malignancy exists in the cases of uterine fibroid brought to operation, and in 30 per cent marked complications of the appendages are present, leaving the ovaries when the uterus or its body is removed for such conditions is hazardous to the future well being of the patient.

(4) In malignant disease of the uterus in which radical surgery is indicated removal of both ovaries is imperative.



(5) The indications for removal of the ovaries when partial or complete hysterectomy is done are increasing instead of diminishing.

(6) When ovarian growths of a bilateral nature complicate the hysterectomy, both ovaries should be removed, though one seems normal.

#### A Plea for Simple Round Ligament Ventrosuspension.—

B. S. Talmey, M. D., (*Medical Record*, December 29, 1906). The writer describes how evolution has taken place since 1877 in the different surgical methods of dealing with this condition.

He claims that the passing of sutures into the muscular tissue of the fundus in cases where ventrosuspension is indicated *i. e.* in the child-bearing woman is objectionable, because it is not in the power of the surgeon to say whether his operation will turn out to be a suspension or a fixation.

His operation consists of the usual incision in the median line immediately above the pubis, and locating the round ligament; at the proximal end (close to the uterus) of the round ligament he then inserts the first suture of chromic cat-gut and brings same up and passes it through the rectus muscle about two c.m. from the abdominal incision and about three c.m. above the symphysis.

Another suture is inserted through the round ligament one c. distant from first and passing through the rectus muscle one c. from the first, then the same procedure is followed on the opposite side.

Now traction is made on the sutures and thus the round ligament is brought up to the abdominal wall, and so the fundus of the uterus comes up as near as you wish it; the sutures now are tied on their respective sides and the abdomen is closed. A pessary is now placed in the vagina and left there until patient leaves the hospital. The writer claims for this operation:

(1) That its simplicity is decidedly in its favor.

(2) That it in no way causes any impairment of the reproductive capacity of the patient.

(3) That it is universally applicable and entirely satisfactory under all conditions.

(4) That the uterus is placed in the most physiological position, being held forward by its normal supporting structures in the most natural way.

## OBSTETRICS.

**The Legal Responsibility of the Physician for the Unborn Child.**—This subject was presented by the chairman in the section on Obstetrics and Diseases of Women at the 57th Session of the A. M. A. In the course of the address the author makes a number of important statements that should be brought to the notice of everyone practicing obstetrics.

All physicians as well as other biologists must regard the child in the womb as much a human being while still in the womb as after its expulsion. Although dependent on its mother for nourishment and for protection from injury and cold, it is still a living being, and as much an independent existence as for example an intestinal parasite which depends on its host for protection and nourishment.

That it lacks some of the functions of the individual exutero for example, the respiratory does not disprove its independence or its human nature.

The statement is further made that we must regard this human being as just as independent at the beginning of its intrauterine life as after it has reached a stage when it can live outside of the uterus. The perception by the mother of fetal movements does not prove or disprove the life of the child any more than would a lack of consciousness of movements of other parasites which exist in her body disprove their existence.

The legal status of the child in utero does not conform to its biologic status.

All human beings exutero are on the same plane and neither a physician or anyone else has the right to take the life of one for the benefit of the other. The unborn child has not the same legal protection. Under certain circumstances its life may be taken. The laws of most states and countries justify feticide when it is necessary to save the life of the mother. The provisions of these laws are of great importance to the medical profession and should be well known. According to the ancient English common law, the embryo or fetus before the time of quickening, had no legal rights whatever.

Now, however, this provision of the common law has been superseded by the statutes which have been passed by the several states. These statutes in most states make no distinction between the commission of an offense on the child before or after quickening, although some states still provide a more serious punishment when the act is committed after quickening.

The statutes of the several states generally provide that any attempt to procure an abortion, either by the administration of drugs or by the use of instruments, is punishable by imprisonment unless the act is necessary to save the life of the mother. When the death of the mother results, the crime becomes manslaughter and is punishable as such.

All statutes provide for exemption from punishment for abortion in case it is necessary to preserve the life of the mother. This provision expressly implies, that in the eyes of the law there is a difference in the value of human lives. It is on this provision that the physician probably must rely for exemption in case of mutilating obstetrical operations made on the living child.

In some states the statutes require that the advice of two physicians be secured to determine the necessity of an abortion. Where the rule does not hold, consultation is not necessary but always desirable.

**The Relation of the Kidneys to Eclampsia.**—Philip King Brown, (*Jour. A. M. A.*, January 13, 1906). That the cause of Eclampsia is still involved in obscurity is demonstrated by Brown in his investigations in connection with this paper.

In a series of 715 cases, Little, of John Hopkins, reported albumin present in pregnancy in 48.8 per cent during labor, and in 62 per cent of 560 cases.

Trautenroth found albumin in 45.5 per cent of 100 cases of pregnancy and in 99 per cent of 59 cases of labor.

This makes it clear the writer states that the kidneys show the strain of pregnancy and labor by an elimination of albumin in practically every case. In a vast majority of the cases there is nothing to show that this strain is significant of more than the similar appearance of traces of albumin and occasionally casts in the normal individual after exercise.

The occurrence of casts, far more frequently in the urine of multipara than in primipara, is a strong argument against the renal origin of the eclamptic poison, for 80 per cent of the cases of eclampsia occur in primipara according to German statistics.

The theory on which eclampsia was first held to be dependent upon kidney disease was, of course, this association of albumin with the attacks and the similarity of the convulsive seizures in eclampsia to uremic convulsions.

It has been shown definitely that the blood in pregnancy is more toxic than normal, and that this toxicity is further increased

in eclampsia. All attempts to show an increase toxicity to the urine have thus far been unconvincing.

The recent work of Schmorl, Dienst and Lipman calls attention to the fact that the placenta of eclamptic cases are commonly pathologic, that there are large communicating spaces found in these placenta, that thrombi of placental cells are frequently found in the maternal veins (although they are found in non-eclamptics also); that the blood of the fetus in eclampsia has a hemolytic action on the maternal blood and finally that serum emulsions from dried placenta of eclamptics produce death in animals in whom it has been injected, whereas serum from normal placenta made in the same way is harmless.

The writer then arrives at the following conclusions:

(1) Albumin is present in fully 80 per cent of normal pregnancies.

(2) Albumin and casts are found in at least 30 per cent of all pregnancies.

(3) There is no reason to suppose that the renal condition thus revealed is a cause of eclampsia.

(4) That there is some connection however between the albuminuria and the extra renal cause of eclampsia is likely in view of the nearly constant association of the two.

(5) It has been shown that neither any normal end product nor any known intermediary product of metabolism is the cause of eclampsia.

(6) It is reasonable to suppose that deficient thyroid or parathyroid activity plays a part at least in some of the cases of eclampsia.

(7) The most significant experimental work done up to this time points to the fact that in the placenta are formed the toxic substances which probably are responsible for eclampsia.

**Mensuration of the Child in Utero.**—Elie McDonald, (*Jour. A. M. A.*, December 15, 1906). The author describes the method as follows: An ordinary pelvimeter of simple construction is taken and two rings of adhesive plaster about 1 c.m. in width fastened to the tip. The patient is laid on her back and the operator stands as if to palpate for the position of the head. An accurate diagnosis of the fetal position, not only in regard to the occiput, but as to the amount of flexion of the head is essential to success.

The occiput and sinciput are located, then the fingers are thrust into the rings, and the knobs of the instrument approxi-

mated to these points as closely as possible. It is necessary that the hinge side of the pelvimeter should have free play of movement in order that one or other tip may be depressed if occasion requires. The tips are held firmly against the cephalic poles and the scale read. This gives the occipito-frontal diameter.

**Injuries to the Child's Head During Labor.**—B. Sachs, (*Jour. A. M. A.*, November 10, 1906.) Dr. Sachs who is the Neurologist to the Bellevue Hospital. states that for many years he has been anxious to enlist the interest of the obstetrician and general practitioner in the injuries which the child's brain is apt to sustain during parturition. The general opinion prevails and it is not wholly wrong that the child's head is wonderfully tolerant, and that the child is none the worse for prolonged labor and instrumental delivery.

In a careful study of his cases of infantile cerebral paralysis he found that a very considerable number were either first born children or had been born after prolonged, often dry, labor. Careful statistics of several hundred such cases showed that less harm is done by instrumental delivery than by prolonged labor.

A word of warning therefore should be uttered to the obstetrician that other things being equal, and above all the life of the mother not being in danger, it is wise to curtail the period of labor as much as possible and not necessarily to wait until the child's heart action becomes feeble. Many children might have escaped epilepsy, idiocy and paralysis if the period of labor had been properly managed.

**Treatment of Eclampsia.**—In a discussion of this subject before the Obstetrical Society of Philadelphia, the following conclusions as to treatment of eclampsia based on the cases at the University of Pennsylvania maternity were announced by Dr. John C. Hirst.

- (1) Chloroform to avert the attack if possible.
- (2) Fifteen minims of fld. ext. verat. viride, hypodermatically.
- (3) Wash out the stomach, and through the tube introduce two oz. castor oil and four drops croton oil.
- (4) Hot vapor bath or hot pack for thirty minutes in every four hours.
- (5) Hypodermoclysis of one pint of normal saline solution under the breast every eight hours.
- (6) If convulsions recur, repeat the verat, viride in five minim



doses every hour for three doses, and then if blood pressure is still high and the patient is cyanotic, venesection is performed, removing from eight to sixteen ounces of blood.

(7) Under ordinary circumstances let the labor alone.

#### **Blood Pressure During Pregnancy and the Puerperium.—**

W. J. Vogeler, M. D., (*Amer. Jour. Obstetrics and Diseases of Women, Children*, April 1907). This article presents an immense amount of original work and gives the technique used in arriving at the following conclusions :

During the earliest months of pregnancy, the pressure is about normal, it gradually rises during the last eight weeks and reaches a maximum at the beginning of the last week before delivery, when there is a slight but unimportant decline.

This rise during the last part of pregnancy was formerly attributed partly to hypertrophy of the heart, partly to intra-abdominal pressure and to a slight extent to a mild auto-intoxication existing at this time. Later observers, however, dispute any hypertrophy of the left ventricle, the increase of dullness toward the left being attributed to upward displacement of the diaphragm.

Soon after labor sets in there is noted a rise in blood pressure increasing with the pains and reaching the highest point just before the birth of the child.

Soon after the delivery of the child there is a rapid drop in blood pressure which in some cases follows immediately.

The pressure may continue to fall for some hours after delivery, but has usually reached its lowest mark by the eighth hour after, when it again begins to rise and generally reaches a point a little higher than in the early months of pregnancy.

If pressure is taken when the patient is first allowed out of bed it is found rather high and greatly influenced by slight disturbances. After the patient has returned to bed and rested it will however return to what is normal for her. All cases which ran a normal course before, during and after delivery, and whose blood pressure was regularly taken, showed normal blood pressure charts.

Blood pressure work has reached its greatest usefulness in cases of moderately high tension, for in no instance has any such case if carefully watched, and pressure systematically taken, gone on to eclampsia.

Many cases of eclampsia give a history of previous indisposition, swelling of the ankles, diminished amount of urine, headache, etc., in which the convulsions perhaps could have been pre-

vented, had blood pressure records given warning of the more serious attacks to come.

That the blood pressure in eclampsia is unusually high is an established fact, and a sharp drop occurs after the uterus is emptied. The rise in blood pressure is the best prodromal symptom of eclampsia regardless of whether albumin is present or not, and the staying up of the blood pressure even if other symptoms disappear makes the prognosis very unfavorable. The author lays especial stress on the fact that high pressure can exist and continue without convulsions, and with only a small amount of albumin in the urine. In these cases the prognosis is just as unfavorable as in those with convulsions, unless the pregnancy be terminated.

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## BOOK REVIEWS.

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A MANUAL OF OTOTOLOGY.—By Gorham Bacon, A. B., M. D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an introductory chapter by Clarence John Blake, M. D., Professor of Otology in Harvard University. Fourth edition, revised and enlarged. Handsome 12mo volume of 485 pages, with 134 illustrations and 11 plates. Price, cloth, \$2.25 *net*. Lea Brothers & Co., Publishers, New York and Philadelphia, 1906.

The work is primarily a students text-book as stated in the preface, and yet it contains much matter which is essential and should be of interest to the physician who is still a student. The Introduction by Dr. Blake, of Harvard, would make a worthy editorial for the best journal of Otology. In it he calls attention to the inconsistency of neglect of the subject in the average college with the consequent short post graduate course which is often the basis of the boast of being a so-called specialist.

Osteomyelitis, primary jugular bulb thrombosis and suppurative inflammation of the labyrinth are subjects not found in the older editions of the work.

Middle ear disease and its complications receive special attention, and an appendix on the method of preparing smears from pus in these conditions has been added.

The book is rich in cuts and excellent colored plates. On the whole, it is a decided improvement over previous additions, and deserves generous commendations.

B. L. J.

**TUTTLE ON DISEASES OF CHILDREN.**—A Pocket Text-book of Diseases of Children. By George M. Tuttle, M. D., Attending Physician to St. Luke's Hospital, the Martha Parsons Hospital for Children and Bethesda Foundling Asylum, St. Louis, Mo. New (2d) edition, thoroughly revised. In one 12mo volume of 392 pages, with 5 plates. Cloth, \$1.50, *net*; flexible leather, \$2.00 *net*. *Lea's Series of Pocket Text-Books*, edited by Bern. B. Gallaudet, M. D. Lea Brother & Co., Philadelphia and New York, 1907.

The second edition of this excellent manual of the diseases of children has recently been issued. This one of the vast if not the best, of the smaller works upon that subject. A glance through the subject matter will show that it is very comprehensive and complete embodying the latest ideas upon diagnosis and treatment. The author has in an admirable manner condensed his expression so that the book though small contains as much as many more ambitious tomes. The style is clear and lucid and the many suggestions will prove valuable to its readers. P. F. B.

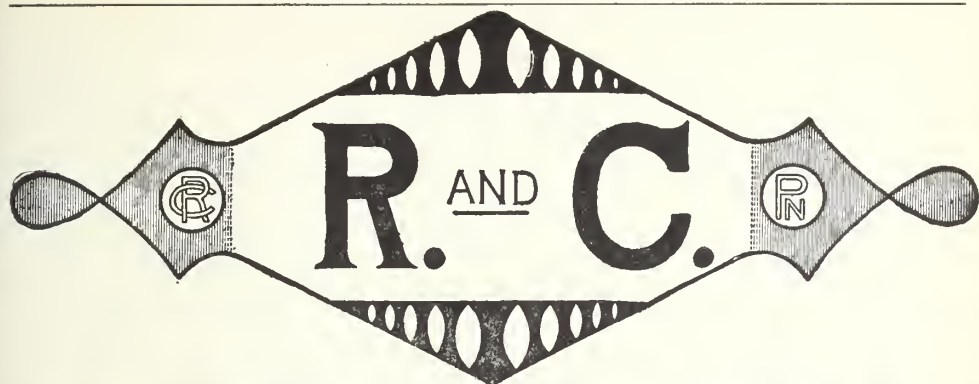
#### BOOKS AND PAMPHLETS RECEIVED.

**Hawthorn Works for the Manufacture of Power Apparatus.**—Western Electric Company.

**Scarlet Fever (Scarlatina) its Prevention, Restriction and Suppression.**—Published by the Illinois State Board of Health, 1906. Please preserve for future use. Should a case of scarlet fever occur near you, you can do yourself and your community great good by seeing that the family has one of these pamphlets. Copies can be obtained in any desired quantity, without cost, by addressing the Secretary at Springfield. Springfield: Illinois State Journal Co., State Printers. 1906.

**The Cure of Consumption by Feeding the Patient with Subcutaneous Injections of Oil.**—By Thomas Bassett Keyes, M. D., Chairman of the First Organization Committee of the American Congress of Tuberculosis, and one of the Vice-Presidents of the International Congress of Tuberculosis, St. Louis, 1904. Chicago, Ill. Reprinted from the Medical Brief, June, 1904.

**The Prevention of Tuberculosis by Building up the Defensive Powers of the Body.**—By Thomas Bassett Keyes, M. D., Chairman of the First Organization Committee of the American Congress of Tuberculosis, and one of its Vice President-at-large of the International Congress of Tuberculosis, St. Louis, 1904. Chicago. Reprint.



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## POWDER BURN OF FACE,

BY E. KUDER, M. D.,

COFFEYVILLE, KAN.

About a year ago I was called in a hurry to relieve the awful suffering of Carl Rucker, of this city, 10 years old, who when playing with other boys exploded about two ounces of coarse black powder in a little earth mount, and not being quick enough to turn away got the most of the discharge into his face; even the conjunctiva of both eyes were blackened, and from the burn and subsequent inflammation shut tight; one of the ears also got burned very badly.

To extract the powder from the skin I have in years gone by applying a thick layer of castile soap made into a sort of dough, and as I had to deal here with the inflammation and pain beside, I scraped a cake of shaving soap, mixed it thoroughly with Antiphlogistine, and applied it about one half inch thick all over the face and ear, leaving a hole for the eyes, nostrils and mouth. About one half hour later the little patient, a very sensible child, rested very comfortable free from pain and slept a few hours soundly. About 24 hours later I removed the whole mask from the boys face and to my great delight and surprise the applica-

tion had drawn out every kernel of the powder. The inflammation had been greatly reduced, pain was all gone and the face appeared almost natural again with the exception of the sclera of both eyes, which I treated with a solution of Cocaine ad-renaline.

Another remarkable circumstance is the fact that the boy at the same time got entirely rid of his freckles, not a trace of the latter could be detected.

For about a week the face got anointed with cold cream twice daily, and being well was discharged as cured.

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SELF-PROPELLED VEHICLES.—A practical treatise on all forms of automobiles, by James E. Homans, A. M., Fifth Revised Edition, entirely rewritten. New York, Theo. Audel & Co., 63 Fifth Avenue, 1907. Recognizing that the gasoline vehicle is the typical automobile, considerable space is devoted to its complete discussion; theory, operation, and an extensive chapter on "Gasoline Engine Management," the latter covering, virtually, all forms of difficulty liable to occur under service conditions. Anyone reading this chapter can derive an intelligent conception of the requirements for an expert driver, and will find numerous points of information, usually obtainable only by long and varied experience.

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Tuberculosis and cholelithiasis are only very rarely associated.—*Amer. Jour. of Surgery*.



# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

### PRURITUS OF THE ANAL REGION.\*

BY BERNARD ASMAN, A.M., M.D.,

*Professor of Diseases of the Rectum, Kentucky University,  
Medical Department, Louisville, Ky.*

THAT a more annoying, more persistent, or more intractable affection than well-defined, fully-developed pruritus of the anal region can hardly be found in the entire realm of medicine and surgery will not be denied.

To a greater degree, if possible, than in any other condition is it necessary to make an extremely careful study of the etiology of the particular case if any hope of cure, or even of benefit, is to be entertained, for upon this point, as will be presently seen, hinges the selection of the proper method of treatment. Pruritus of the anal region, as is readily inferred from the term, has for its chief symptom itching of the area involved; but the term in its full significance means much more than this—it is intended to convey the idea of a true pathological condition of the skin of the affected area.

There are three distinct clinical types of the disease to be recognized:

1. That in which the itching is of but recent origin and in which inflammatory changes have but just begun, the trouble being due to fissure, blind internal fistula,

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\* Read before the Mississippi Valley Med. Ass'n, Hot Springs, Ark., Nov. 6-8, 1906.

ulcerating hemorrhoids, or other disease of the rectum capable of producing an irritating discharge, which almost constantly bathes or at least keeps moist the peri-anal skin.

2. The advanced or fully-developed stage of the foregoing. In this the itching is more intolerable, more constant, and the changes in the skin itself pronounced. The skin becomes thickened and more and more indurated as the result of repeated attacks of inflammation. It is thrown into folds and bleeds because of much scratching.

3. That form of pruritus which might be properly termed a disease in itself; *i. e.*, the condition in which the trouble is not a symptom of, and has not been produced by, some disease of the rectum or surrounding structures. This is the form which some authors are pleased to style systemic pruritus, because there is no apparent local disease to account for the trouble, and because it seems to be due directly or indirectly to some general or systemic disease, such as gout, rheumatism, lithemia, etc. It need hardly be mentioned in this connection that simple irritation of the anal region, with consequent temporary itching, does not constitute pruritus ani in the accepted sense of the term.

To return to our first clinical type, that in which the itching is of but recent origin, and in which inflammatory changes in the skin have but just begun, one would readily suppose that a condition of this kind seen soon after its inception should be quite easy to cure. Compared with the other forms of the disease, such is the case, but compared with other anal diseases seen at the same stage of development, quite the reverse is found to be true. A rigid and complete examination of the rectum and anal region must be made. While acute the skin around the anus for two or three inches is very red, oftentimes edematous, and frequently excoriations cover the surface. When the buttocks are held gently apart and the edges of the anus everted, one or several drops of pus may be discovered. It is important to look for the pus in this way, for by the time it has reached the peri-anal skin it may

be so mixed (the quantity being small) with perspiration or other moisture of the part that it may no longer be recognizable as pus. Once found, it is a clue which easily leads to the prime cause—usually a small blind internal fistula, irritable hemorrhoids (perhaps ulcerated), anal fissure, or ulceration of the rectum itself. Now, the question is at once suggested: Why should these diseases produce pruritus in one case and not in other cases? In fact, why not in the majority of cases? The answer seems to be found in the theory of predisposition. Thus individuals predisposed to dermatitis generally are particularly prone to develop this affection upon the slightest provocation. Given the predisposition, then, and one or more of the conditions mentioned capable of producing an irritating discharge, bathing as it must, because of the anatomy of the part, the anal canal and peri-anal skin, especially if found in an individual who is not scrupulously careful to frequently cleanse the anal region, we will quickly have the first symptom of pruritus of the first type manifesting itself.

Needless to say, the longer this condition is neglected the worse it becomes, finally merging into the second type. Fortunately, the cure of the cause, especially if early in the attack, results in complete relief. This removes the irritating discharge, and the skin, not yet being badly diseased by the inflammatory processes, soon returns to the normal. The folly of attempting to cure pruritus of this kind by the application of salves, lotions, etc., is too palpable to admit of argument. Is the cause, then, found to be an ulcerating anal fissure, not involving the sphincter muscle, complete relief and cure can be given the patient by a few office treatments. After thoroughly cleansing the part and anesthetizing by injecting a beta-eucain solution, the base and sides of the ulcer can be carefully trimmed away with a pair of small curved-on-the-flat scissors. Dress the wound every day until healed. Stopping the morbid discharge stops the itching. The other conditions mentioned can also, as a rule, be removed by operation, with the aid of a local anesthetic. In some

cases, however, and especially in those in which the diagnosis is not absolutely positive and complete, a general anesthetic should be given in order that a more satisfactory search may be made and that no vestige of the disease may escape.

The following case typically illustrates this form of pruritus:

Mr. G., aged thirty, bank clerk, married, good habits; was referred to me by his physician January 10, 1906, because of an intense itching of the anus and peri-anal skin, which had existed several months and which had persistently refused to yield to the application of the usual anti-pruritic remedies. Inspection showed a slightly increased amount of moisture on skin around anus and in anal canal. Holding the anus open with a bi-valve speculum, a small submucous fistula in the anterior wall of the bowel, beginning just above the external sphincter and leading upward for about an inch, was readily detected. By means of local anesthesia the suppurating tract was easily eradicated, the wound healing in about ten days. The patient was instructed to keep the anal region perfectly clean and dry. The itching ceased entirely within three weeks, since which time there has been no suggestion of its return.

In type No. 2 we have a very much more serious condition with which to deal. It has its origin in the same way as No. 1, and is, in reality, simply a neglected case of the first type, having its symptoms greatly intensified, the changes in the skin, the results of the repeated attacks of inflammation, being especially marked. The skin loses its natural elasticity, becoming hard and brittle, and much thickened, the terminal nerve filaments being compressed. In cases of long standing the color changes from the bright red, as seen in the acute form, gradually assuming a dull-gray, or even pearly-white appearance.

As co-existing conditions, which may have served as causative factors, oftentimes are found an hypertrophied and irritable sphincter muscle and rectal constipation. An irritable sphincter adds much to the suffering these pa-

tients have to endure and is the direct cause of rectal constipation—a condition in which the rectum is never free from feces. This keeps up congestion, which adds to the irritation by direct pressure and also results in the production of a great deal of flatus, which, as voided, carries with it some mucus, thus keeping the anal region moist and thereby adding to the pruritus.

In the severe forms of the disease the pain and itching are more or less constant, yet subject to exacerbations intermittent in character, coming on more especially (1) after defecation, and (2) at night when the patient has become warm in bed. These attacks often become so distressing to the patient that his rest is seriously interfered with; he sleeps but little and his general health suffers in consequence. If he is not already a neurotic he soon becomes very nervous, is unfitted for society or business; never knowing when an uncontrollable as well as unbearable seizure of itching is coming on, he becomes melancholy, hopeless, finally desperate.

Manifestly in such a case the first thing to do is to find the exciting cause and eliminate it; remembering, however, that while this is an important part of the treatment and must not be overlooked, it does not constitute the entire treatment, for in this type of pruritus we still have the diseased skin, hardened and thickened from repeated attacks of inflammation, partially excoriated from much scratching, the terminal nerve filaments compressed, diseased, and partially destroyed, to contend with.

If the sphincter muscle is found to be irritable or hypertrophied it should be completely divulsed or divided. Whatever rectal disease may exist, such as hemorrhoids, fistula, ulceration, etc., should receive the appropriate radical treatment. The bowels should be moved regularly, especial care being taken to see that the rectum is kept free from fecal accumulations. Diet and exercise must not be overlooked. Smoking and alcoholic drinks should be forbidden. Tea and coffee should be used in moderation,



if at all. A light diet, such as soups, bread and milk, eggs, etc., recommended.

Cleanliness of the anal region is a necessity. Rest and sleep, in extreme cases, must often be artificially produced for a time, care being taken that the patient does not contract a drug habit. Lotions and applications of various kinds have been recommended in great numbers, many of which are complete failures in the majority of cases. Of the lotions one of the best is the lactate of lead, highly recommended by Miles, of London. It can be easily prepared by mixing one drachm of liquor plumbi subacetatis with seven drachms of fresh milk. It forms a thick, creamy compound with which a piece of gauze or cotton can be saturated and placed in contact with the itching surface. In my experience the most reliable agents to release the compressed nerve filaments and to restore the diseased skin to the normal condition are monochloroacetic acid and compound tincture of benzoin, used in the following way: After thoroughly cleansing and drying the affected area paint it over very lightly with a saturated solution of monochloroacetic acid, being careful not to allow the acid to touch any place except the part to be treated. Apply gauze saturated with olive oil and bandage. Inspect the part the following day, and if there are any points that have not been acted upon by the acid, retouch them. After four or five days the superficial layers of the epidermis that have been destroyed by the action of the acid begin to peel off, leaving a raw but healthy surface, if the acid has gone deeply enough. Keep clean, dress every day, and as soon as the desquamation is complete apply compound tincture of benzoin liberally every second or third day. This can be done conveniently by means of a tooth-pick, around the end of which a small pledget of cotton has been wrapped and dipped into the benzoin. Partial relief from itching dates from the first application of the acid, and it should be complete by the time the skin is entirely healed; if it is not we are to understand that the acid has not acted deeply enough, and

a second application should be made and followed by treatment with the benzoin as before.

The following case is illustrative of this type of the disease:

Mr. E., white, farmer, aged forty-two, presented himself for treatment in November, 1904, saying that he was a sufferer from "itching piles." He had been robust and healthy all his life with the exception of the year preceding this time, during which, he said, he had been annoyed so much by the "itching of his piles" that he had become very nervous, had lost flesh, appetite had become poor; he could not sleep or rest at night, was almost constantly uneasy, and at times the pain and itching was almost past endurance. He said he could not work or concentrate his mind on anything, and that he had come to the conclusion that unless he could get speedy relief life was no longer desirable to him.

Examination revealed large internal hemorrhoids that would protrude easily. The mucous membrane of the anal canal was harsh, rough, and indurated. The skin in a radius of three inches laterally and posteriorly and as far as the scrotum anteriorly was thrown into folds, had lost its elasticity, pearly-white in appearance, and much thickened from inflammation, kept up by constant scratching. He was given a general anesthetic, the hemorrhoids removed by the modified excision method, and the affected skin treated with monochloroacetic acid, followed by the benzoin application, as just described. The pruritus was relieved, and there has been no recurrence of the trouble.

The third type of pruritus ani, viz., that in which the itching and the diseased skin is not a symptom of, and has not been produced by, some form of ano-rectal disease, frequently presents features that are indeed puzzling. Idiopathy, as formerly taught in regard to this condition, is no longer accepted. That there must be a cause, even though it may not be evident, there can be no question. Apparently neurotics and those who have a tender skin and who perspire very freely are especially liable to this form of disease. It must not be forgotten that various

parasites, especially threadworms, cause most obstinate pruritus. Of the systemic conditions with which we may find pruritus associated, either as a symptom or as a product of the disease in question, may be mentioned lithemia, gout and rheumatism, chronic constipation, and auto-intoxication. That pruritus often depends upon the same cause that accounts for the existence of lithemia, gout, or rheumatism is demonstrated by the fact that remedies which relieve these diseases benefit or relieve the co-existing pruritus.

Intestinal fermentation, constipation and consequent auto-infection play a great part in many disease conditions, in none more so than in pruritus of this form. Consequently, then, in studying the etiology of obscure cases of pruritus, disturbances about the alimentary tract must be investigated and the proper remedy applied. Indeed, many cases will be benefited by thorough cleansing of the intestinal tract, followed by the use of the so-called intestinal antiseptics, to keep clean and prevent further toxemia; together with anti-lithic remedies in rheumatism and uricemia. The constitutional trouble, the cause of this form of pruritus, then, being attended to, there still remains the effects of the inflammatory attacks in the skin of the affected area itself, to be treated. In the opinion of the writer this can be done in no better or surer way than by the use of the monochloracetic acid and benzoin, as described.

HAST BUILDING.

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### A FEW NOTES ON TRACHOMA.\*

BY S. G. DABNEY, M. D.,

LOUISVILLE, KY.

THE name trachoma is derived from the Greek word "Trachus," meaning rough. The synonyms of the disease are Egyptian ophthalmia, military ophthalmia and granular conjunctivitis. It has existed since the earliest historical times in parts of Europe, but has always prevailed most widely in Egypt. When the European armies re-

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\* Read before Louisville Clinical Society, April 2, 1907.

turned from the Napoleonic Egyptian campaign, great numbers of them were afflicted with trachoma and hence the name Egyptian ophthalmia. So widespread was the disease in the Belgian troops that, by the advice of an eminent Berlin oculist, the affected soldiers were discharged and sent to their homes; as proper prophylaxis was not employed, the result was to spread the disease widely among the people.

That trachoma is a contagious disease and that every case arises from a preceding one, there can be no doubt. Much study has been given to its bacteriology, but as yet without definite results. The racial tendency to it and exemption from it are well marked. The American Negro is almost, if not absolutely exempt and this would seem to disprove the contention of some writers that what appears a racial predisposition is really due to lack of cleanliness and overcrowding. Among Russians and Jews of the lower class trachoma is very common. Many immigrants are turned back from our shores every year on account of trachoma.

The text-books state that this form of conjunctivitis prevails in low countries and is rare in high lands, and yet in my own observation it is frequent in the mountain counties of Eastern Kentucky. Indeed the larger number of severe cases of trachoma which I see are from that portion of the State, and I think this is also the experience of my Louisville colleagues.

In the great majority of cases both eyes are affected; this is what we should expect and the remarkable thing is that we do sometimes see well marked, even severe trachoma confined to one eye, when no special precautions have been taken to protect the other. This would seem to suggest that some receptive condition must exist in the conjunctiva for the development of the disease.

Almost always the inflammation begins insidiously, the symptoms being slight secretion, a feeling of heaviness and burning about the lids, discomfort in the use of the eyes and oversensitiveness to light. Rarely it begins with all the evidences of an intense acute infection; great

burning and pain, swelling of the lids, injection of the bulbar as well as the palpebral conjunctiva and mucopurulent discharge.

Writers generally classify trachoma into the papillary form in which the chief feature is enlargement of the papillæ of the palpebral conjunctiva, the granular form of which the characteristic is the presence in the mucus membrane of minute roundish translucent or pale yellow granules and the mixed form in which these symptoms co-exist.

Fuchs, however, gives the best description. He regards the essential element in trachoma as hypertrophy of the conjunctiva progressively increasing to a certain stage, then subsiding and leaving an atrophy in its wake. Bearing in mind this description it would seem impossible that follicular conjunctivitis and trachoma should be considered as the same disease; and yet a few authors are of this opinion, though the great majority regard them as distinct. My own observation leads me to believe them entirely unlike, except in their long duration and in the presence of slight roundish elevation in the conjunctiva. In the follicular form of the disease these enlarged follicles are much more developed in the lower lid, and though there may be a few on the sup; formix they are rarely well marked on the tarsus of the upper lid; there is no hypertrophy of the conjunctiva and slight if any appearance of inflammation. Subjective symptoms are often entirely absent and the condition leads to no bad result. In one institution for children in the city I have seen in the past dozen years a great many such cases. I have never yet seen one of them present the complications or sequelæ of true trachoma.

An interesting case of trachoma confined to one eye was recently seen in a little girl from central Kentucky. Typical trachomatous hypertrophy existed in both upper and lower lids, and the lachrymal caruncle was so involved as to present the appearance of a small tumor which had been mistaken for pterygium. The other eye was perfectly sound.



It is rare for doctors and nurses to become infected, and yet one of the most obstinate cases I have ever seen was in a young doctor whose eyes became inoculated while he was operating. I saw this case through the courtesy of Dr. Cheatham.

The prognosis of trachoma is serious. It is therefore wise here, as in all grave diseases, to be as positive as possible before making a diagnosis. The majority of cases if seen before corneal complications or disastrous sequelæ have taken place make a good recovery, but the treatment is likely to extend over months and sometimes over years. Of course to those who include a mild follicular conjunctivitis under this disease, the prognosis will be much more favorable.

Treatment may be divided into prophylactic, medical and surgical. Under the first it is well to warn the patient who has only one eye involved against carrying any secretion into the other, but from the chronic character of the disease it is not practicable to use the means which are effective in purulent ophthalmia.

In public institutions great care should be exercised against the admission of trachomatous patients, and if admitted every effort made to prevent the spread of the disease by towels, handkerchiefs, bed-linen, etc. It is well for the doctor in operations to protect his eyes by glasses.

In medical treatment two old and tried remedies are worth everything else—silver and copper. In some cases dionin has seemed to me to hasten the cure and adrenalin with cocaine lessens the pain of the copper applications. In the acute stage and in rebellious chronic cases atropine sufficient to keep the pupil dilated, and hot applications to the eye for twenty minutes in every two hours are of great value. The general health should be maintained and outdoor life advised with protection from dust and excessive light. The nitrate of silver usually in solution of 10 grains to the ounce is to be brushed once a day over the everted lids when there is much secretion. Only when it is not well borne do I substitute argyrol in twenty-five per cent solution. In the circatrical stage complicated with pannus

the effect of blue-stone, atropine and hot applications is often wonderful.

In extensive and thick pannus the infusion of the jequirity was formerly much and is still sometimes used. My experience with it has been limited, but in a few cases I have observed excellent results from it. It excites an acute conjunctivitis. We are reminded by it of the advice of Shakespeare, "Put some new infection in thine eye, that the rank poison of the old may die."

Surgical treatment includes several operative procedures, but I will refer only to the operation of expression by Knapp's roller forceps. General anæsthesia is necessary. The lids are compressed and rolled by the blades of the forceps and the contents of the trachoma follicles squeezed out.

Months of treatment may often be thus saved. Cold applications should be made afterwards to prevent excessive reaction, and it is generally necessary to continue the astringent treatment for some weeks longer.

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## RATIONAL THERAPEUTICS.

BY C. J. BROYLES, M. D.,

MOUNTAIN CITY, TENN.

**P**RESCRIBING is a custom that is apparently becoming obsolete with many doctors, and with many others has never been properly learned.

I mean by prescribing, its old and original meaning; that is, the designation of a remedy or a combination of remedies for the relief of patients, and not the very common habit of ordering or delivering to the sick some ready-made mixture of an indefinite number of probably useless drugs, none of which are known to be embodied in the nostrum, and if known, the amount and proportions not given.

The only apology for making this matter the subject of an address is its increasing importance. It is a condition that interests, or should interest all of us, either

as a body or as individual physicians, because it means the stultifying of the profession in many ways. It obtunds the acuteness of the choice of remedies that tends to a high degree of skill in therapy. It begets slovenly scientific habits. It makes us poor observers, and consequently limits our experience and thus makes us poor diagnosticians. It destroys or impairs our judgment as to the values of remedies, and finally it makes of us therapeutic nihilists which non-belief is transmitted to our patients.

Let us deliberately reflect on this unhappy condition, for it is one of much interest and menace, both to the medical profession and the public, and it is due to each that it be continuously considered until properly concluded and settled.

There are many causes for this loose habit of prescribing. The medical journals are teeming with attractive advertisements, and in the lower class of journals these advertisements are allowed to slop over into the reading matter, and in the very poorest journals the editorial page is soiled with editorial commendations. This subsidizing of the medical press is possibly the greatest curse that confronts the medical profession to-day. And the greatest culprits are the ones that enforce themselves on us and come unbidden.

Skillful advertising will sell anything, and the same degree of skill that causes us to eat brown bread crumbs mixed with black jack molasses, and to think it good and wholesome, will incite a thoughtless doctor to order some worthless mixture from the home of the orthodox fake, and think that he has really prescribed.

Many of the medical journals of our country owe their existence and maintenance to this class of advertisements. The official organ of this society advertises Ayer's medicines, and yet it probably does better at that than with some others it carries, for instance, one which claims to be an absolute cure of dropsy cause from heart, liver or kidneys. The claim of an absolute cure of dropsy from any cause should appeal to us at once as being positively

ridiculous and absurd. These journals would not survive a month were it not for their nostrum advertising, and they should be despised by all honorable physicians. And in the coming fight of the honest medical men of this country for a higher order of therapeutics, these so-called journals will be on the side of the nostrum manufacturers.

The "accompanying literature," that is the waste basket material that comes with the free samples, makes the giving of these very often useless but elegant mixtures so easy that many of us find a hope of cure for many different maladies of very different causation. And we are the victims of this meaningless mass of so-called literature and cunningly devised advertisements, sharp agents and a certain amount of indolence.

Then when we are tempted to do this easy prescribing we remember a certain article written by some eminent man, usually a professor, commending this tissue builder or a certain emenagogue, or that never failing remedy for bright's disease, or probably a German make of iron and manganese. It then appears very wrong to deny the sufferer this quick relief.

These articles are usually printed for free distribution, or are published in the fourth-rate medical journal, both of which seriously burden the U. S. Mail and encumber our offices. A very common claim made is that the proprietors are chemists of unusual skill, and that because of that fact they have been able to evolve medicinal qualities of unusual power from some very familiar drug. Now these claims are most always ridiculously and positively false.

There are some vaunted opposed-to-pain remedies which contain little else than deadly coal-tar derivatives claiming to be synthetical chemical combinations. The committee on chemistry and pharmacy of the American Medical Association has, as well as many other good chemists, shown that they are mechanical mixtures of acetanilid with bicarbonate or salicylate of sodium, or carbonate of ammonia with a small amount of citrate of caffeine in some instances. Now any physician with sufficient education to

enable him to obtain a license and to make a diagnosis should be able to write as good or better prescription, and one that is adapted to the case in hand. Moreover it could be obtained at one-tenth the cost and would surely not be ordered in many or most of the diseases that the literature urges these to be used in. Acetanelid can be purchased for twenty-five cents per pound, and if used in any of the copyright mixtures such as named above will cost probably eight dollars per pound.

Tasteless cod liver oil preparations are very popular with the ready-made prescribers. Here is the report of some chemists who made an analysis of a well known preparation: "We recently had occasion to open a package of a well known preparation of 'Tasteless cod liver oil.' The circular was replete with interesting information, especially for the patient who obtains the preparation in the original package as prescribed by the physician. He finds in it a list of the diseases in which the preparation does wonders; they range from dread consumption to cystitis and hemorrhage of the kidneys. Most interesting to us, however, is the statement that the compound contains all the elements of nutrition. It is too bad to disturb this beautiful vision by a report of chemist. This shows that the product is quite free from oil or proteids; the only nutritive ingredients are perhaps alcohol, sugar and glycerine. But the claims of the manufacturer are probably correct, because it contains carbon, hydrogen, oxygen and probably a trace of nitrogen—so does gunpowder. Perhaps it will now be the turn of strychnine to be advertised as the ideal food. It seems superfluous to point out the moral of this tale."

There is a nostrum that comes to our desks that claims to be a very valuable remedy for all kinds of catarrh whether it be nasal, gastric or uterine, and is used internally and externally. It does not intimate its composition, but says in black-faced type that "substitutes and imitations are dangerous," and says to us "do not allow the use of substitutes for your patients." Analysis reveals that this mixture is composed of water with a very little



glycerine and coloring matter and some of the common well known alkaline salts. Less than a dozen Seiler's tablets, with nine drams of glycerine in a pint of water will make the same thing, practically, less a little coloring matter which any self-respecting man would prefer to omit.

The truth is, there is no more necessity for advertising a good medicine than there is to advertise good cotton, corn or wheat, and the very fact that a drug is being advertised is prima-facia evidence that it is no account. The way to bring a drug to a doctor's attention should be through the pharmacopeia and work on therapeutics, and in standard medical journals and medical societies.

The druggist all tell us that after a representative of any certain line of preparations has called on the doctors that there is always a perfect shower of prescriptions for his specialties. This cannot be due to the fact of any sudden increase of sickness, but is due to the lamentable fact that these agents have put us to work as distributors.

Often some of us are so foolish as to not even write the prescription, simply telling the patient to buy, as the name has been selected or coined for the reason that it is very easily remembered; or if written fall into the trap of ordering in the original package, and the patient wonders why he was so foolish as to call a doctor, or why he did not call a different one which he will probably do the next time he has need for one. His druggist or even the hired man would have done as well. And we are asked and have readily assented to the proposition to make ourselves the distributing agents of these various imposters parading themselves as ethical preparations.

Among the various reasons given by some writers is this: That in the passing of the days of preparing our own food and our own medicines we have learned to depend too much on others and have been imposed upon. It is not for the want of good medicine as there is more than ever, but we have been fanned to sleep and dreamed that

this vast array of new remedies is better than the old standards.

Another reason for this condition is indifference or a lack of knowledge that such prescribing is not dignified, is not scientific practice. This is done thoughtlessly and the habit has grown unconsciously upon them. But the most powerful factor in the cause of this deplorable condition is the neglected study of pharmacology and therapeutics.

This is acknowledged with humiliation, but 'tis the object of the speaker to candidly place the facts before you as they appear to him. A lack of proper training in our student days lying at the very bottom of it all, for we could never have erred so grossly and so long had we been properly trained in that early day of our professional career.

Now we have always considered that there is a wide difference between what we call patent medicines that are advertised to the public, and the so-called ethical proprietaries that are advertised to the physicians exclusively. But this difference is small if it really exists and we would about as well prescribe one as the other. One-fifth of the proprietary associations of America are firms that advertise ethical preparations, and a portion of the others manufacturing ethical preparations, at the same time making nostrums for popular use.

Many, very many of this class of drugs parade as specifics, some of them claiming to be specifics for more than one disease. But Billings says, "modern medicine has established the fact that specific medication for disease is very limited. The specific sera used as antitoxines and bactericides, organo-therapy in a very limited field, quinine in malaria, and mercury and iodines in syphilis comprise the list. A rational use of drugs preferably in simple form to stimulate or maintain the physiologic function of organs embarrassed by unhygienic habits, by an acute infective process or partially crippled by a morbid anatomical process is the chief reliance of the physician.

"Palliation of suffering is an important therapeutic

measure; the rational careful and conscientious physician primarily attempts to make a definite diagnosis; the removal of the cause when possible is an important step with the rational management of the personal hygiene, and it requires fine judgment to know when and what to give in disease as well as when not to give anything."

The good results that may be obtained in the use of any of the compounds depends on the action of some well known drug listed in the pharmacopeia. in which may be found an ample supply of material to satisfy the most enthusiastic believer in drug theraphy.

Knowing the folly of depending on these unreliable and false remedies let us turn about and put our faith in measures that are reliable and true, adjusting the remedy to the patient for whom it is intended and not endeavor to do the impossible thing of adjusting each and every patient to the product of some commercial firm. Then we will have done the best possible thing for our patients with honor and credit for ourselves.

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### SEXUAL IMPOTENCE.\*

BY GEORGE DAY, M.D.,

LOUISVILLE, KY.

IMPOTENCY is a collective idea of the various pathological details which hinder a man in the carrying out of coitus, so that the ultimate purpose, that of begetting a child, is not attained, in spite of sexual intercourse with a fertile woman.

Another definition is, "The term impotency implies a lack of ability to perform the sexual act."

Therefore a man affected with impotence is not necessarily sterile; on the other hand, neither is a sterile man always impotent.

This subject was never touched upon by the older writers, and not until here of late that such men as Casper, Eulenburg, Krafft-Ebing, and others have devoted

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\* Read before the Louisville Medical and Surgical Society.

their time to the subject that any thought had been given it and the thousands of unfortunates suffering from it, directly or indirectly.

It is not my purpose to go deeply into the matter of the physiology of erection for coitus, and hope to only present in a small way the different forms of impotency with treatment.

Impotency may be divided into three forms, namely: Organic, psychic, and atonic.

Organic impotency is caused by lesions involving the spinal chord, producing sclerotic changes either in the lumbar centers or in their afferent or efferent nerve fibers; for instance, in the lumbar ataxio, syphilitic lesions of the cord, and in some forms of myelitis. In most forms of the organic impotency the malformations of the external genitals are the predisposing causes; thus there may be an entire absence of the penis or testes; in that case, of course, no treatment can be attempted. Extreme smallness of the penis and testes occurs now and then, it being noticed at birth, or in some cases the growth being suddenly arrested. Veeki cites six thousand cases where only five showed malformations of importance, and in only three were the external genitals affected.

Robert T. Harris cites six authentic cases of entire absence of the penis, after looking up all the literature on the subject.

Hypospadia, epispadia, laceration of the urethra, excessive development of the penis, narrowness of the external meatus, defective development of the erectile tissue, shortness of the frenum, hydrocele, inguinal hernia, tumors of the genitals, must come under the heading of organic impotency. Chronic diseases, of course, impair sexual power; autointoxication, caused by various products of undue fermentation in the intestines, is a very common cause of temporary weakening of sexual vigor.

Obesity is known as the destroyer of the power; also diabetes, which condition, it is said, is one of the first signs of the approaching disease. Gummata, of course, is seen now and then, as is also elephantiasis of the scrotum.

Psychical impotence is a very common form, all the sexual organs being normal, with perfect erections, coupled with a willingness of mind. This condition is generally the result of sexual excesses, or may be due to nervousness, especially in the newly married, occurring at times when failure of the act is most mortifying.

*Atonic.*—In this form the erections are imperfect, emissions are premature, while the desire is strong. This condition is due in most cases to gonorrhea and its resulting sequelæ, *i. e.*, inflammation of the urethra and stricture; then, again, ungratified sexual desire, consumption and wasting diseases. Opium, tobacco, alcohol, lead-poison, carbonic acid gas are said to cause the lessening of the sexual vigor.

This is the most common form of the disease, resulting, in most cases, from a neglected case of gonorrhea. Too much cannot be said of this variety. Suffice it to say, however, that, in a large per cent. of cases, it can always be traced to an old clap condition, and, in looking over my records of nearly forty cases I find 80 per cent. due to an old inflammation along the track, which keeps the nerve filaments and mucous membrane in a constant state of excitability, causing a lack of erection and premature ejaculation. In a class of most common cases the inflammation becomes firmly imbedded in the prostatic follicles, ejaculatory ducts, seminal vesicles, or in the vas deferens, probably being further aggravated by a stricture.

Atonic impotency is the form most frequently met with among masturbators. It is also seen as the result of excesses in the newly married. This form, however, regulates itself and seldom needs treatment.

*Diagnosis.*—Each case must be given the care and attention that it richly deserves. A careful history will reveal the exciting cause; not only a thorough examination of the sexual organs, but the stomach, heart, and lungs, and other organs, especial care being given the examination of the urine; also the microscopic examination should never be omitted, thereby the presence of pus may be determined. After the urinalysis a close exploration of the



anus may disclose some lesion. Finally, the sexual organs should again be examined carefully, the urethra explored as if for stricture, being certain of the absence or presence of granular patches, stricture, spasmodic contraction, areas of unusual tenderness; in fact, anything at all abnormal in the general condition of the canal.

Lastly the testes must be palpated, being careful to notice any undue tenderness of the organs, their size, position, and the presence of any swelling or growth.

*Treatment.*—Impotence, mostly difficult to cure, is often incurable. The great number of specifics speak for themselves. Each case requires remedies and treatment which makes it a law unto itself.

In the choice of remedies everything must be taken into account—occupation, age, habits, mode of living, etc. In order to be successful with this class of patients, the first plan is to gain his confidence. He comes to you very reluctantly, with many misgivings, with a false modesty that makes it very hard to reach them. Added to that the larger percentage of our profession care very little for this class of work. He is examined in a half-hearted manner, a handful of pills prescribed, and he is told to go his way. This apparent lack of sincerity on the part of the physician only adds disgust to fear, and we next find him a fit subject for some sanitarium, with a well-marked case of melancholia, or perhaps worse.

In the organic form the gumma may be made to resolve itself with specific treatment. In the class of malformation the different plastic operations suggest themselves, and in this class a great deal may be accomplished. In those cases, impotent as the result of some predisposing cause, such as obesity, diabetes, tuberculosis, elephantiasis of the scrotum, etc., very little can be done.

Psychic impotence is treated upon the plan of suggestion, the main idea being to make a strong and lasting impression. All local irritation is removed, his general health is looked after, special attention being given to exercise, diet, and recreation. He is told to keep his mind off his trouble, not to worry, that he will be all right;

also that he is to keep away from all women for the time being, that he must under no circumstances attempt the sexual act with prostitutes, since the failure of such a trial is nearly assured, as they are not conducive to a normal degree of sexual excitement.

The psychic patient is kept under observation for the necessary period and under certain conditions, and at a given time he is told that he is well and able to perform his sexual duties. He has been taking a combination of strychnine, phosphorus and damiana, which tends to excite the spinal centers. After the first intercourse the spell is broken, and he gives thanks to his great and good physician.

*Atonic.*—The treatment of this form of impotency is both general and local. If due to carbonic acid gas, lead-poisoning, alcohol, drug habit, hemorrhoids, constriction of the meatus, varicocele, removal of the cause will generally clear up the case. If, however, it is caused by gonorrhea or stricture, local as well as general treatment is instituted, granular patches healed by applications through the endoscope, stricture cure by dilation or cutting; in the case of inflammation and congestion of the urethra, irrigation, instillation and free use of sound will generally bring about a cure.

Where there is no inflammation and stimulation is in order, a very good instrument is the physcrophore, which is a hollow sound that permits a stream of water to flow freely through the instrument, using either hot or cold water.

In hyperesthesia, attended by the irritative form of atonic impotence, cold water through the physcrophore is most serviceable. The temperature should be between 40° and 50° F., kept up about ten or fifteen minutes, ever third day.

The rectal douche advised by Chetwood, of hot water, is very good, using a solution of sodium chloride seven-tenths per cent.; strychnine in full doses; massage and electricity very good in most cases, as is also the needle-spray applied once daily. In case of failure a complete

course of hydrotherapy and electricity is advised, change of occupation and surroundings, and if carried out will bring about the desired effect.

CASE I.—Organic. Mr. W., age twenty-three, occupation revenue service, has had a tight frenum from childhood; erection caused the penis to curl at such an angle that coitus was impossible.

*Treatment.*—Deep incision, relieving the tension; good result.

CASE II.—Psychic. Mr. H., age twenty-six, occupation bookkeeper. Enjoys good health, has never had gonorrhea, fond of athletics, noticed a lessening of sexual power one year ago; had a fondness for prostitutes; for the last five months had failed at every attempted intercourse. Examination disclosed nothing abnormal; urine negative; no hemorrhoids nor any irritation in the rectum or urethra, all the other organs of the body being in perfect condition.

*Treatment.*—Exercise, baths, change of companions, abstinence from intercourse, mild stimulation. At the end of three months advised to get married.

*Result.*—Married; wife now pregnant.

CASE III.—Mr. W., age forty, occupation saloon-keeper. A typical rounder; had gonorrhea, as he said, a dozen times; wants to marry, but finds on attempting intercourse the erection fails at the last moment; also bringing about premature ejaculation.

*Examination.*—Stricture, granular patches, a condition of chronic posterior urethritis.

*Treatment.*—Sounds every third day; gradual dilation; instillations of silver up to 3 per cent. twice weekly; discharged in ninety days.

*Result.*—Now married and says everything is lovely.

## Proceedings of Societies.

### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, FEBRUARY 26, 1907.

DR. J. R. WATHEN: I have two specimens to present to the Society. The first is a foreign body removed from the knee-joint. It was removed from a young man about twenty-five years of age, who six months previous to its removal complained of injuring the knee, having sprained it, and later he noticed a foreign body slipping around in the knee-joint, and occasionally in walking this would slip between the bones, and the leg would become locked in a semi-flexed position. This locking of the knee joint was exceedingly painful, and after much difficulty he would move the foreign body; he could then use the knee very nicely. There was no swelling about the part, and in all other respects the knee was perfectly normal. My diagnosis was a floating cartilage in this knee-joint, and I removed it.

These bodies are exceedingly difficult sometimes to remove, and in order to make no mistake before the patient took the anesthetic I located the foreign body and pushed it up into the upper part of the synovial sac, and then placed a rubber tube around the leg and held the foreign body fixed in this part of the knee-joint. He was then given the anesthetic, and I cut down on this and removed it. The patient stayed in the hospital one week and then left in fine condition, the wound healing by first intention. These cases require strict asepsis.

This next specimen is one of an appendix. I was called over in Indiana last Friday to see a woman, aged twenty-five, who two or three days previous to the operation complained of pain in the region of the appendix. Her temperature was 103 and pulse 120. The pain on the morning of the operation had entirely disappeared, and this led me to suspect that perforation had occurred, and when I operated I found a large perforated appendix walled off by adhesions.

DR. W. H. WATHEN: This morning I removed, in an operation for ectopic pregnancy, a little embryo which you see here in this specimen. Pregnancy had advanced to the sixth or eighth week. The history of the case is as follows: The woman is the mother of two children at term, and she has had three miscarriages. I do not know the date of the last. She was sent to the hospital about a week ago, and she claimed that her

periods began the next day. Her periods had been irregular, and recently she had been having some flow of blood, and so her period was not unexpected.

About ten days ago she sent for her doctor, who found her suffering intensely. He gave her a hypodermic of morphine. This part of her history I only learned to-day. I operated on her this morning. Until after the operation I was able to get no definite history leading up to the ectopic pregnancy at all. I only got this history after the operation and really did an exploratory operation to see what the trouble was. She was complaining of constant pain in the pelvis. The omentum had become considerably adherent, and I removed a large quantity of blood. This specimen shows a tubal pregnancy at the outer end of the tube with a tubal abortion. The tube was removed. In cleansing the pelvis of the blood-clots I found the embryo lying free in the cavity. We see here the beginning formation of the placenta beautifully outlined. This little specimen shows on one side the amniotic sac, and on the other you will see the chorionic structures. When it is put in water you can see the chorionic villi projecting out, such as we find in abortions.

At the last meeting of the Society I reported a case of ectopic pregnancy that I had seen with Dr. Morris. There was no history that would positively lead us to suspect that ectopic pregnancy existed, just as there was no history in this case. In Dr. Morris' case the rupture occurred early, probably two or three weeks before I operated, and the adhesions—intestinal and omental—were extensive.

Now, this is another evidence in my experience—because I have had over a hundred of these cases—that Mr. Tait was wrong when he said that when tubal pregnancy ruptures into the peritoneal cavity, unless the patients were operated on at once they bled to death. I have seen but one bleed to death, and that was fifteen years ago. I have operated upon them weeks after the rupture, when I have found blood-clots extending as high as the umbilicus. They never die, as a rule, of primary hemorrhage, and nearly every one will get well if operated on afterwards. Of course, there is no reason why they should not be operated on primarily, because it is safer. Many of these cases, when they come to their physician, will give evidences of having ruptured probably two or three weeks before there are any typical evidences of ectopic pregnancy observed.

DR. FLEXNER: Dr. Frank is going to give me the oppor-



tunity to report an interesting surgical case in which he was the operator. Some three weeks ago, in the Doctor's absence, a lady from Shelbyville came into my office and said that she had come to see Dr. Frank. She said that she had had some trouble in the abdomen and had been operated on fifteen years ago for appendicitis and the wound never healed, and her physician later stated that she had a ventral hernia. I looked at her, and it seemed that she had a half or two-thirds of the bowel lying in the sac of the hernia. Dr. Frank saw her the next morning. At the operation for the relief of this hernia a large ovarian cyst came into the field of operation. The surgical aspects of the case I shall leave to Dr. Frank to discuss. I want to say that the wound healed nicely and the patient is doing well.

DR. FRANK: There is a great deal to say about this case. It happened to be one of those cases that we see occasionally following an operation for appendicitis, where it has been necessary to leave the wound open and resort to drainage.

This woman was operated on twice; first for a puerperal infection; the nature of the operation she does not know, but it is presumed that pus was cleaned out of the pelvis. The second operation was for appendicitis—suppurating appendicitis—and the wound was left open. The first incision had closed perfectly, but the second one was wide open, and part of this woman's intestines were out of the sac. We examined her and found a hard mass presenting at the upper portion of this hernial opening, which we took to be possibly a prolapsed liver. We had a continuous line of dullness from the rib margin on down to this point. This tumor protruded some into the sac, and the walls could be approximated. With the history of the median incision, and the presumption being that the adnexa and the uterus had been removed, I must confess that such a thing as the pathology connected with the structures did not enter my mind at all, and even if such had been the case I hardly think I would have made a diagnosis. I think anyone would have been excusable for not making a diagnosis in such a case as this, because this tumor did not occupy any portion of the lower abdomen. It was confined, as proved at the operation, in the upper portion of the abdominal cavity. The lower abdomen was tympanitic. We made the incision and went down into the cavity and separated the adhesions, except at one point, thinking that it would be inadvisable to separate at this point, as it would leave a defect in the peritoneum of the abdominal wall, this

defect being midway between the primary appendiceal incision and the median.

After cleaning up we proceeded to investigate as to what this mass was. We opened through what seemed to be a layer of peritoneum. I think it was a thinned out fibrous band or structure formed when the inflammatory condition existed and thinned down by the pressure of the tumor. We opened this and recognized a cyst. The question was where did it arise? When we pushed it back in the cavity it went up under the diaphragm. We could not separate the kidney, and we thought possibly it was a large cystic kidney springing from the left side. But we explored the thing further and believed we could feel a pedicle running down into the pelvis. We evacuated the tumor and removed between twenty-five and thirty pints of clear serum. The tumor appeared to spring from the left broad ligament; I say left broad ligament because it did not appear to spring from the left ovary. Passing over the tumor, the pedicle was very long; I should judge four inches, maybe more, in length. It was brought out of the incision, and the ligatures applied without traction. On the other side, we found a small cyst, also in the broad ligament. The fluid in this was perfectly clear. Passing over the cyst, we were able afterwards to tract a portion of the tube. We have not subjected this to microscopic examination. The wall of the sac was smooth, but seemed to be covered with a yellowish cast and presented the appearance of an old abscess sac, and seemed to be lined with a pyogenic membrane. We made no bacteriological examination, and we shall submit the tumor to a microscopical examination.

The wound, which was widely separated, we were able to approximate. The operation was done Friday or Saturday, and the wound has healed perfectly, except at one little point. The patient has had no temperature, and her convalescence has been smooth.

The origin of the tumor is an interesting point. This woman presented no symptoms of a tumor except a large abdomen. I never saw her out of bed, but in bed she had no appearance of an abdominal tumor. Upon examination I noticed nothing except dullness passing down from the rib margin.

The occupying of the lower abdomen by the intestines is an interesting point. I have never seen this in an ovarian cyst. Ordinarily the cyst occupies the lower portion, and the intestines are crowded above. This arrangement of the viscera in

the presence of an ovarian cyst I have never seen, and therefore, from a clinical standpoint, I think it is interesting in this respect.

We could pass a probe into this tube for a number of inches. There was a distinct layer of broad ligament between the tube and the ovary. I hardly think it originated from the organ of Rosenmueller. It seemed to originate in the tube. That it could be a hydro-salpinx of this size I hardly think. I think it is a cyst arising from the vertical tabules. A cyst of this kind does attain this size.

DR. ABELL: The case presented by Drs. Flexner and Frank is an exceedingly interesting one and presents many interesting features. The thing most interesting to me and most fortunate for this woman and Dr. Frank and the most fortunate thing for union was the fact that this woman had this tumor. If all of these cases would bring a tumor we could relieve them. If she had had a hernia for fifteen years my experience has been that Dr. Frank would never have gotten these walls together.

DR. W. H. WATHEN: This is certainly a very interesting case, and the origin of the tumor is what we are all most interested in. While the outer layer of the tumor could not be characteristic of par-ovarian tumors, it may be that some changes occurred that interfered with this, as the ovary was intact and the tumor had a long pedicle. I can conceive of but one explanation, and that is that it arose from embryonic remnants in the broad ligament—some of the tabules that were left from the vertical tabules of the Wolffian body. I cannot conceive how it could have arisen at all in the tube. The par-ovarian cysts nearly always grow up and not down.

DR. FLEXNER: I think the absence of the resistance of the abdominal muscles explains why the tumor occupied the upper portion of the abdominal cavity.

DR. FRANK: Just a word. I think Dr. Flexner's explanation is quite true. I think possibly the intestines were matted in the lower pelvis and there was no place for the tumor to grow and it gradually extended along the line of least resistance. I think that explains the position of the tumor in that it was the only portion of the belly that could be occupied.

As to the origin of the growth, I understand Dr. Wathen's explanation. I have never seen a par-ovarian cyst of this size reported.

DR. WATHEN: I removed one weighing fifty pounds.

DR. FRANK: I do not think it is a tumor of the organ of Morgagni, on account of the size and on account of its attachment to the tube. When we have a cyst of this sort we have no involvement of the tube. This was not between the folds of the broad ligament. It was not a par-ovarian cyst. The vertical tabules are below the tumor. I do not say that this is a tube. I do not see how a tube could attain this size. It would take an awful stretch of the imagination to believe it.

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#### AMERICAN MEDICAL ASSOCIATION.

At the Atlantic City Session of the American Medical Association the following resolutions, regarding the work of the Council on Pharmacy and Chemistry, were presented by the Reference Committee on Reports of Officers and were unanimously adopted by the House of Delegates :

WHEREAS, The Council on Pharmacy and Chemistry, after examining many hundreds of preparations, has officially announced its approval of a large number of such preparations; and

WHEREAS, We believe that the editors of many medical journals in this country, both official organs of State Associations and privately owned journals, are desirous of co-operating in the work of freeing the medical profession from the nostrum control; therefore, be it

*Resolved*, That this Association most earnestly requests all medical journals to refuse to aid in promoting the sale of preparations which have not been approved by the Council, by refusing advertising space to such preparations; and be it further

*Resolved*, That we most earnestly request the moral and financial support of our members for those medical journals, whether privately owned or controlled by medical organizations, which disregard commercialism and stand firm for honest and right dealing, thus sustaining the Council in its greatest work for the medical profession.

T H E

# American Practitioner and News.

“NEC TENUI PENNÂ.”

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F. W. SAMUEL, A. M., M. D., SAMUEL B. HAYS, M. D.,	}	EDITORS.	O. P. NUCKOLS, M. D., Ph. G.
			MANAGING EDITOR.

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## Editorial.

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*Keep in the Middle of the Road.* It has been said that “large bodies move slowly,” and if we think for a moment of the rapid advances of the great body of medical workers, we almost conclude that the old saying is not true as applied to the medical profession. Yet, while it is true that the profession *en masse* does move slowly, there are a few great thinkers who make rapid strides in advance of their time, and may be compared to the red blood current, as it shoots along the central axis of the blood stream with the leucocytes straggling along the outer margins, with now and then one extravasating through the vessel walls and falling out of the forward movement altogether. But there are functions for the white blood corpuscles to perform that are as essential to human existence and human health as there are functions for the red blood corpuscles. Just so in the medical profession; it is as essential to have the deliberate and the conservative element as it is the impulsive and enthusiastic element. It is the quiet and subtle influence of the conservative element that causes the more erratic and risky to “keep in the middle of the road” so to speak.



The medical profession is composed largely of two classes: those who have an inclination to scientific investigation and research and no doubt a great desire to obtain personal fame; and those who are great humanitarians, who love to practice their profession for the great service they can render to humanity. It is this class largely that acts as a court of final resort to all new advances. It is to the final judgment of the conservative element that we look before any new remedy or procedure reaches its proper equilibrium. The extreme of over desire to bring before the profession some new and untried remedy is almost, if not quite, as dangerous to public health as the other extreme of inertia. Let us cite as an instance the first advent into the medical arena some of the coal tar derivatives and the immense harm done, besides a number of fatalities before their proper and safe limitations as to uses and dosage was rendered by the great army of conservative practitioners. I recall a very lamentable case in the practice of one of my most esteemed fellow physicians, in the loss of a most estimable lady patient by the administration of what was at that time thought to be a safe dose of one of the coal tar preparations, while at the present time no physician of experience would administer. What is true of coal tar preparations is true of many others. What is true in therapeutics is true in surgery and the various sub-divisions of the healing art. I am sure that many cases of post-partum hemorrhage, sepsis and lacerations following the ruthless and hasty termination of labor, would have been avoided by trusting more to the *vis medicatrix natura*. We would not be understood as offering any objections to the wheels of progress, but rather a warning to "keep in the middle of the road," and progress if possible without the sacrifice of human life in so doing. It is neither wise or just to characterize all who do not fall in line at once with every new fad and fancy as ignorant and "old foggy," for in medicine as in business the physician who has the welfare of his patients at heart has a right to demand the crucial

test of the "Man from Missouri" before accepting all that is new, just because it is new.

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#### NOTES AND PERSONALS.

THE fifty-seventh annual commencement of the Kentucky School of Medicine will be held at the Masonic Theater on the night of June 12th. The baccalaureate address will be delivered by Dr. F. W. Samuel, the Dean. Dr. W. H. Wathen, will announce honors, and Capt. Jno. H. Leathers will confer degrees.

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#### OHIO VALLEY MEDICAL ASSOCIATION.

The ninth annual meeting of the Ohio Valley Medical Association will be held at Evansville, Ind., November 13 and 14, 1907. The two-days session will be devoted to the scientific work of the Association, and the evening session of November 13th will be a popular assembly held in one of the largest auditoriums of the city and to which the laity will be most cordially invited.

At this session Dr. Beebe will deliver his retiring address and Dr. Curran Pope, of Louisville, will deliver the annual oration, his theme being "The Age In Which We Live."

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AT the last meeting of the County Medical Society, June 25th, medical education was the main subject of discussion. It seems to be the concensus of opinion that the Louisville schools are now doing more scientific work and graduating more thoroughly educated doctors than during any previous years; and that the profession of the city and the state are determined to use their best efforts to aid the schools, and the State Board is sustaining a reputation for medical education equal to that of any other state in the Union. This will be more easily accomplished because of the fact that the State Examining Board now controls the requirements for admission and examines for licensure after graduation.

## **Recent Progress in Medical Science.**

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IN CHARGE OF  
ADOLPH O. PFINGST, M. D.,  
AND  
BERNARD ASMAN, M. D.,  
LOUISVILLE, KY.

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### **EYE, EAR, NOSE AND THROAT.**

ABSTRACTS OF PAPERS READ BEFORE THE SECTIONS OF OPHTHALMOLOGY AND OTOTOLOGY OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 4, 1907.

**The Indications for Resection of the Middle Turbinal.**—(William E. Casselberry, Chicago.) From an analysis of about 120 operations, about one-half of them double, recorded from private practice, the indications which have led to resection of the middle turbinal of the nose and the results which justified it are summarized as follows: 1. To promote drainage and counter-drainage in nasal accessory sinus suppuration and for access in diagnosis and treatment. 2. To promote drainage and cleansing in certain types of atrophic rhinitis (atrophic ethmorhinitis). 3. To relieve edematous turgescence and to provide access for the radical treatment of non-suppurative ethmoiditis and nasal polypus. 4. To suspend pressure leading to headache, neuralgia, eye symptoms, and broadening of the nasal bridge, etc. 5. To improve nasal respiration and ventilation. 6. To relieve hyperesthesia and to diminish certain reflexes, *e. g.*, sneezing, asthmatic stimuli, etc. Of these several indications, only the first and second are elaborated in detail.

**The Etiology and Recent Treatment of Hay Fever.**—(Holbrook Curtis, New York.) In reviewing the causes of hyperesthetic rhinitis the author mentions the following factors: First, a nervous element; second, a pathological change in the mucous membrane; third, an exciting constitutional dyscrasia, as lithic acid diathesis; and, fourth, some adventitious irritation, as dust, pollens, or animal emanations. As over one-third of the cases of hay fever are not due to pollens the author does believe that there is a specific treatment for the disease. Many of the cases are due to pathological changes in the nasal mucous membrane, such as deflections of the septum, hypertrophies, synechiæ, etc., and are cured by correcting the nasal trouble.

Many cases of hay fever are also due to uric acid conditions, as are found in subjects of gout, rheumatism, obesity, and disorders of digestion. In these cases changes result in the nasal mucous membrane. The digestive conditions have to be corrected in such cases before results can be expected. The author believes that hay fever may occur from an adynamic state of the nervous system, irrespective of other causes. This is the class of cases characterized by spontaneous attacks, accompanied by sneezing and lachrymation, occurring at any time of the day and irrespective of the season. This class of cases requires toning up the general system by baths, exercise, etc. For this class of cases Curtis uses the following prescription :

R Strychnine arseniatis . . . gr. 5-6  
 Atropin sulphat . . . . gr. 1-3  
 Camphor . . . . . gr. xxv  
 Ipecac pulv. . . . . gr. v  
 M. et ft, in pill No. C.

From three to six pills a day have a very favorable effect.

Referring to the cases supposed to be due to primary intoxications from the pollen toxins, the author says that, although these cases should theoretically react to anti-toxin treatment, the consensus of opinion to-day is against the claims made for pollantin, though some of the followers of Dunbar claim good results from its use. Dunbar himself admits that he is not satisfied it is a specific.

Stress is laid by Curtis upon the use of the suprarenal capsule products. It is applied locally in strength of 1 to 10,000 to 14,000.

**The Major Operative Treatment of Middle-Ear Suppuration and Indications for the Same.** — (Edward B. Deuch, New York.) The indications for major operative treatment for middle-ear suppuration, with operative procedures necessary, are divided into two classes: (1) the indications and operative procedures in acute cases; and (2) the indications and operative procedures in chronic cases. Local tenderness over the mastoid and sinking of the upper and posterior wall of the external ear canal close to the drum membrane are considered the two most important indications for surgical interference on the mastoid in acute cases. Attention is called to the fact that in almost every acute case of otitis media tip tenderness may be elicited within the first twenty-four hours of the attack, but that

it soon disappears and is not an indication for operation. Tenderness beginning later on over the antrum and spreading toward the tip is more significant. Pronounced tenderness over the antrum or tip, coming on the fifth or sixth day of an acute middle-ear inflammation renders an immediate operation imperative. The point is also made that the later the tenderness begins the more imperative is immediate operative interference. As many cases of acute mastoid disease with extensive destruction have been observed in adults without any or very little elevation of temperature, Deuch does not attach much significance to the absence of fever. The value of the blood count has also not proven of much value in his hands in determining the necessity of operation. More importance is attached to the amount of the discharge. A sudden cessation of the discharge coincident with the appearance of mastoid tenderness, especially if physical signs in the canal exist, should always constitute an indication for immediate operation. On the other hand a very profuse discharge is also significant of mastoid involvement. An acute suppurative otitis with free drainage by incision of the drum should clear up in one or two weeks. If a very profuse discharge continues beyond two weeks the author believes that the best interests of the patient are conserved by early mastoid drainage, not only as far as life is concerned, but regarding the integrity of the organ of hearing.

In considering the cases of chronic middle-ear suppuration the author states that every case of chronic middle-ear suppuration should be subjected to the radical operation except that class of cases with practically complete loss of the drum, where dermatization of the tympanum has taken place and the discharge from the ear has ceased.

Although not so stated in his essay, the author, in closing the discussion of his paper, modified his statement of operating upon all chronic cases by the suggestion that every means of treatment should be employed before resorting to the most radical measures. His conservative treatment consists in the maintenance of proper drainage and the removal of products of inflammation by irrigation and in rare cases the removal of the ossicles when they are carious.

**Ocular Neurasthenia.**—(Hiram Woods, Baltimore.) Fatigue symptoms, unrelieved by refraction, correction, and often associated with the so-called hysterical accommodation, may be due to special susceptibility of the eyes to outside irritation,



whose nature may be physical or psychical. These cases may be classified as ocular neurasthenes. They occur usually among industrious people. Thorough search for cause reveals an underlying condition capable of producing objective ocular lesion. Among these causes are unsuspected syphilis, intestinal disorders, hemic and nutritive troubles, pelvic anomalies, often functional, and psychic influences. There are certain ocular troubles which usually cause little or no annoyance, but which may direct a neurasthenic tendency eyeward. Relief of these somewhat lessens susceptibility, but only discovery of the underlying cause, with its medical or surgical treatment, cures. The aid of workers in other medical fields is often essential to correct diagnosis.

**Operations for Secondary Cataract.**—(Peter A. Callan, New York City.) As nearly all operators extract the cataract on lens without the capsule, subsequent operative measures become necessary in the majority of cases. It has been found by taking the statistics of cataract extractions done in different ophthalmic hospitals for a given year that secondary operation became necessary in over 50 per cent. of the cases in order to get good vision. The majority of these cases were in the laboring classes, who do not need very acute vision. If the statistics were gathered from an educated, intelligent class, the percentage would be as high as 75 per cent. The author divides the secondary cataracts into simple and complicated, the former being the thin diaphanous veils due to rumpling of the anterior capsule, the latter the opaque membrane or dense cords. Secondary operation should not be undertaken earlier than six weeks after the extraction, and sometimes later.

The three sources of danger in operating upon secondary cataracts are :

(1) Infection, (2) traumatism, and (3) relighting inflammation due to extraction. Of these the first is least formidable and the latter the most dangerous. The chief danger lies in overhaste in operating before the eye has recovered from the extraction. The author impresses the importance of avoiding traction in cutting secondary membranes. When the membrane is dense he advises the making of a corneal incision with a keratome and then cutting the band with small forceps scissors.

## DISEASES OF THE RECTUM.

**Cancer of the Rectum.**—Wm. M. Beach, A. M., M. D., Pittsburg (*The Proctologist*, March, 1907). This disease is "the common foe, enlisting the energies of science to fathom the mystery and enable us to offer the poor victim some ray of hope." Briefly the author explains that "cancer in the rectum is of all locations the most distressing;" and sounds the keynote of present-day teaching when he says that conservatism should be practiced in the treatment of such cases.

In substantiation of his claims he relates his experience with twenty cases, the clinical diagnosis in each instance having been verified by the pathologist.

He deplors the practice of indiscriminate excision, especially when the involvement of adjacent structures is such that complete removal is impossible, and advocates colostomy as doing the greatest amount of good in those cases.

"It is a common observation that most of these victims are quite advanced in the development of the disease, or are unaware of its ravages, when we are consulted. With the uninitiated consultant the disease may be mistaken in the initial stages for simple or tubercular ulceration, hemorrhoids, or other rectal disease."

He sums up by saying that in cases where it is possible to completely extirpate a cancerous growth it should be done, and done at the earliest possible moment, but unless it can be taken away completely it is better to perform colostomy. Thus diverting the fecal flow relieves much of the distress at the point of disease, comparatively little pain being evident even in advanced conditions of the disease. Hemorrhage is less likely to occur, the intolerable tenesmus is absent, and the annoying discharge is much lessened.

**Excision and Immediate Suture in Fistula in Ano.**—Arthur E. Hertzler, A. M., M. D., Ph. D., Kansas City (*The Proctologist*, March, 1907). This is by no means a new method, but has been tried time and again by various surgeons, nearly always, however, to be finally relegated to the top shelf because of failure to get union by first intention in complicated cases, and consequently one or more small sinuses are likely to be permanently left after the major portion of the wound has healed, thus thwarting the object of the operation, viz.: complete cure of the disease. Dr. Hertzler, however, seems to have met with exceptional success, and says, "My results with excision and

immediate suture have been so satisfactory that I venture a brief description of my technique. I would urge its employment, not only in the simpler cases, but particularly in those extensive ones in which prolonged after-treatment is necessary when operated on in the usual way. No case, in fact, do I regard as too extensive for immediate suture." Were it not for these last two statements we might accept the argument unqualifiedly, but it is difficult to see how one can expect to secure union by first intention in the very extensive cases we are often called upon to deal with. Where the ramifications are so numerous and the destruction of tissue so great that the resulting wound, after the diseased tissue has been excised, is too large to admit of easy approximation of surfaces, it is best, in the opinion of the writer, to secure healing from the bottom by granulation. In simple cases, and in certain selected cases that are complicated, the excision and immediate suture method is ideal.

In Dr. Hertzler's operation the patient is prepared in the usual way, and after anesthesia is sufficient a probe or grooved director is inserted all the way through the main sinus; if there is an additional sinus or branch sinuses other probes are inserted into them, after which the entire amount of diseased tissue is carefully excised, especial care being taken not to cut down upon the director, for the opening of the fistulous tract would permit the escape of infective material. When the rectal end of the tract is reached in the excision the edges of the gut are grasped with forceps near the director in order to prevent the upper end of the incision from retracting up the bowel out of reach of the operator after the director is cut loose. The remaining portion of the tract is now freed and removed, together with the director, upon which it is still threaded. All bleeding points are carefully attended to and the wound brought together by deep sutures of plain catgut. Separate sutures are now placed in the intestinal wall, exclusive of the mucosa. Lastly the mucosa is closely approximated by a layer of sutures, the knots, of course, being placed within the lumen of the bowel. The dressing consists of a gauze umbrella, passed well up above the upper end of the wound, the sack of which is packed comfortably full of gauze, the object of this dressing being to protect the wound until the edges have united.

**Inflation of the Rectum with Carbonic Acid Gas.**—A. Rose, M. D., New York City (*The Proctologist*, March, 1907). Our attention is briefly called to the therapeutic use of carbonic

acid when applied to diseased mucous membrane. The author thinks it strange that so valuable a remedy is so little used and so comparatively unknown in present-day treatment. He says that physicians of the eighteenth century discovered the specific effect of carbonic acid gas on sordid ulcers. They found it relieved pain, caused disappearance of purulent matter, stimulated granulation; especially was it considered as a precious palliative remedy in cancerous ulcers. When the gas is introduced into the rectum it creates a pleasant sensation of warmth, which is the manifestation of dilatation of blood vessels and accelerated circulation. It also has an anesthetizing influence, and this explains one of its beneficial effects on ulcers, especially irritable ones. Perkins, an American physician, who lived from 1740 to 1799, treated ulcers of the rectum by inflation with carbonic acid gas, and reported excellent results. Dr. Rose says that during the last twenty-four years he has inflated the rectum with carbonic acid gas in all cases of dysentery which have come under his treatment and invariably noticed the prompt effect on the tenesmus and speedy cure of the ulcers. The physiological effect of carbonic acid gas inflation of the rectum suggests itself as a most rational remedy also in cases of enteritis membranacea and colica mucosa.

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## BOOK REVIEWS.

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A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE.—By Robert W. Taylor, A. M., M. D., formerly Clinical Professor of Genito-urinary Diseases at the College of Physicians and Surgeons (Columbia University), New York; Consulting Genito-urinary Surgeon to Bellevue and to the City (Charity) Hospitals, New York. Third edition. Thoroughly revised. With 130 illustrations and 16 plates in colors and monochrome. Lea Bros. & Co., New York and Philadelphia. 1905.

The very title of the book is suggestive. It fills a place in medical literature almost peculiar to itself. The books usually accessible on this subject are either genito-urinary treatises limited to the male, or gynecology, largely surgical in scope, confined to the female. Dr. Taylor makes a happy combination of the two, treating the subject not only in a scientific but in an interesting manner.

Sexual disorders of women are more thoroughly treated than in previous editions, and four new chapters have been added. They are: Pruritus of the Vulva, Herpes Progenitales in Women, Gangrene of the Vulva, and Injuries to the Female

Genitals in Coitus. The enumeration of the titles of some of the chapters is worthy of note, since the manner of treatment of these subjects is in no case disappointing. The following are a few: Impotence in the Male, Psychical Impotence, Sterility in the Male, Masturbation in Male Subjects, Sexual Worry and Hypochondriasis and Sexual Neurasthenia, Conjugal Onanism, Sexual Perversion, Masturbation in the Female, and chapters on the various genital growths.

The cuts, monochromes, and colored plates add to the value of the book.

B. L. J.

PROGRESSIVE MEDICINE.—A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, of Philadelphia; Physician to the Jefferson Medical College Hospital; one time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by H. R. M. Landis, M. D., Visiting Physician to the Tuberculosis Department of the Philadelphia Hospital, to the White Haven Sanatorium, and to the Phipps Institute; Demonstrator of Clinical Medicine in the Jefferson Medical College. Volume I. March, 1906. Surgery of the Head, Neck, and Thorax, Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia, and Influenza, The Diseases of Children, Rhinology, and Laryngology, Otology. Lea Bros. & Co., Philadelphia and New York.

Contents: (1) Surgery of the Head, Neck, and Thorax, by Charles Frazier, M. D.; (2) Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia, and Influenza, by Robert B. Prible, M. D.; (3) Diseases of Children, by Floyd M. Crandall, M. D.; (4) Rhinology and Laryngology, by Branden Kyle, M. D.; (5) Otology, by B. Alexander Randall, M. D. Under Surgery of the Head Dr. Frazier devotes considerable space to cerebellar tumors. He gives interesting statistics from 116 cases. Injuries to the cranial nerves are also considerably reviewed. Under Surgery of the Neck his most interesting subject is the thyroid gland. Under Infectious Diseases, by Dr. Prible, epidemic meningitis, scarlet fever, and influenza are thoroughly handled, with most recent results as a basis for discussion.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1906.—Washington: Government Printing Office. 1907.

(1) This report is valuable in its records of medical inspection of immigrants; (2) Yellow fever in New Orleans in 1905. (3) Hygienic laboratory experiments and research work. The national quarantine law of 1906 is given in full. The report contributes much to the advance of medicine.



PROGRESSIVE MEDICINE.—Volume II, June, 1906. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, of Philadelphia. Octavo, 368 pages, 31 illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

Volume II contains the following articles: (1) Hernia, by Wm. B. Coley, M. D.; (2) Surgery of the Abdomen Exclusive of Hernia, by Edward Milton Foole, M. D.; (3) Gynecology, by Jno. G. Clark, M. D.; (4) Diseases of the Blood, by Alfred Stengel, M. D.; (5) Ophthalmology, by Edward Jackson, M. D. Any article of Dr. Stengel's is always worthy of a careful reading. In this particular article he devotes considerable space to pernicious anemia. Hygienic measures are believed to give the best results. A page is given to blood changes in acetanilid poisoning. Acetanilid is found in various proprietary headache powders running from 43 per cent. in orangeine to 76 per cent. in Kohler's headache powders. It is said to bring on a decided leukocytosis, with a certain moral depravity. Gout, diabetes, hemophilia, Hodgkin's disease, and exophthalmic goitre are all considered in the light of most recent laboratory and clinical studies.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—Third series. Volume XXVII. Philadelphia. 1905.

This report contains papers by such noted men as Billings, Weir-Mitchell, W. W. Keen, and Alfred Gordon. Two of these papers are entitled Surgical Reminiscences and Medical Reminiscences of the Civil War. Four other contributions are concerned with X-ray treatment of various conditions. Besides the various papers and discussions, the first thirty-three pages are given up to the directory of the College.

GRAYSON'S LARYNGOLOGY.—The Diseases of the Nose, Throat, and Ear. By Charles P. Grayson, M. D., Clinical Professor of Laryngology, Medical Department University of Pennsylvania. New (2d) edition, revised and enlarged. Octavo, about 550 pages, with 145 engravings and 15 plates in black and colors. Cloth \$4.00 *net*. Lea Brothers and Co., Philadelphia and New York. 1906.

This is the second edition of Dr. Grayson's estimable work. The work is decidedly improved by an increased number of cuts and colored plates. If there is any one feature of the text which distinguishes it from others on the same subject, it is in the chapters on examination of the patient and also on treatment throughout the work. As the author says in the preface to the first edition, "not only *what* to do, but *how* to do it."

The concluding chapter takes the form of a medical formulary, which will be found decidedly helpful to the general practitioner in those cases which he does not wish to send to the specialist.

THE WORLD'S ANATOMISTS.—Concise Biographies of Anatomic Masters, from 300 B. C. to the present time, whose names have adorned the literature of the Medical Profession, by G. W. H. Kemper, M. D., Professor of the History of Medicine in the Medical College of Indiana, Indianapolis, Ind. Revised and enlarged from the original serial publication in the *Medical Book News*. With eleven illustrations, nine of which are portraits. P. Blakiston's Son & Co. 1012 Walnut Street, Philadelphia. 1905.

This little brochure contains in brief form, alphabetically arranged, the names and work of the great anatomists. An occasional reading of the booklet fixes in mind the various points of interest and value which are bound to slip the memory of the best of us. There are also a number of photographic reproductions of famous engravings and etchings of interest to the medical man.

PROGRESSIVE MEDICINE.—A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, of Philadelphia; Physician to the Jefferson Medical College Hospital; one time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by H. R. M. Landis, M. D., Visiting Physician to the Tuberculosis Department of the Philadelphia Hospital, to the White Haven Sanatorium, and to the Phipps Institute; Demonstrator of Clinical Medicine in the Jefferson Medical College. Volume IV. December, 1906. Diseases of the Digestive Tract and Allied Organs; Liver, Pancreas, and Peritoneum; Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics, Genito-urinary Diseases, Diseases of the Kidneys, Practical Therapeutic Referendum. Lea Brothers & Co., Philadelphia and New York. 1906.

The following are the contents of Volume IV: (1) Diseases of the Digestive Tract and Allied Organs; the Liver, Pancreas, and Peritoneum, by J. Dutton Steele, M. D.; (2) Genito-urinary Diseases, by Wm. T. Belfield, M. D.; (3) Diseases of the Kidney, by John Rose Bradford, M. D.; (4) Anesthetics, Fractures, Dislocations, Amputations, by Jos. C. Bloodgood, M. D.; (5) Practical Therapeutic Referendum, by H. R. M. Landis, M. D.

One of the most interesting and important of the topics considered in Dr. Steele's article is gastric secretion, in which lowered gastric secretion and normal and abnormal acidity receive special attention. Gonorrhea, syphilis of the prostate, and surgical conditions of the urinary tract are considered under genito-urinary diseases. Acetanilid, antidiphtheritic, antitetanic, and antistreptococcic serums receive attentions under therapeutics. On the whole, the December issue is a helpful number.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1905.

We are pleased to acknowledge the receipt of this report of 1905, gotten up so exhaustively and attractively under the direction of the Surgeon-General. The Treasury Department is to be complimented on the issue.

PROGRESSIVE MEDICINE.—Volume III, September, 1906. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, of Philadelphia. Octavo, 298 pages, 14 illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00; carriage paid to any address. Lea Brothers, Publishers, Philadelphia and New York.

Volume III contains the following matter: (1) Diseases of the Thorax and Its Viscera, including the Heart, Lungs, and Blood Vessels, by Wm. Ewart, M. D., F. R. C. P.; (2) Dermatology and Syphilis, by Wm. S. Gottheil, M. D.; (3) Obstetrics by Richard C. Norris, M. D.; (4) Diseases of the Nervous System, by Wm. G. Spiller, M. D.

Obstetrics receives the most attention and is written in a thorough manner. Chemistry of toxæmias in pregnancy and clinical manifestations of the toxæmias of pregnancy are, carefully considered. Dr. Norris reviews Edgar's reports of the results of a year's study of the subject. Eclampsia, in its latest aspects, with treatment, is also reviewed. The latter portion of the article is devoted to obstetrical surgery. Lateral subcutaneous symphyseotomy is also reviewed, with Aubert's conclusions added. In a word, the article is an excellent review of the recent obstetrical literature.

THE EXAMINATION OF THE FUNCTION OF THE INTESTINES BY MEANS OF THE TEST-DIET.—Its Application in Medical Practice and Its Diagnostic and Therapeutic Value. By Prof. Dr. Adolf Schmidt, Physician-in-Chief of the City Hospital Friedrichstadt in Dresden. Authorized translation from the latest German edition, by Charles D. Aaron, M. D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine; Clinical Professor of Gastro-enterology in the Detroit College of Medicine; Consulting Gastro-enterologist to Harper Hospital, etc. With a frontispiece plate in colors. Crown octavo, 91 pages, extra cloth. Price \$1.00 *net*. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This work owes its origin to a series of lectures delivered by Dr. Schmidt in the summer of 1903. They sum up the results of the continuous investigations and observations of eight years. It is the purpose of the author to offer suggestions which can be carried out in practice. It is an excellent adjunct to similar works on test-diets in stomach disorders.

[REPRINTED FROM THE BULLETIN OF PHARMACY, MAY, 1907.]

**FRANK G. RYAN ELECTED PRESIDENT OF  
PARKE, DAVIS & CO.**

The presidency of Parke, Davis & Co., left vacant by the death of Theodore D. Buhl, has been filled by the advancement of Vice-President and Secretary Frank G. Ryan—an announcement which will be greeted with pleasure by Mr. Ryan's numerous friends throughout the country.

Mr. Ryan was so ideally equipped for this great position that he began to march towards it with what is now seen to have been



-MR. FRANK G. RYAN,  
Elected president of Parke, Davis & Co., just after returning  
from a trip around the world.

almost predestination, as soon as he joined fortunes with the house seven years ago. He left the faculty of the Philadelphia College of Pharmacy in the spring of 1900 to become Chief Pharmacist of Parke, Davis & Co. At the end of three years he had made himself so valuable in the councils of the house that he was elected to membership on the Board of Directors. A year and a half later he was given the important post of secretary. Six months later he was elevated to the vice-presidency.



And now, after barely another year, he is given the very highest position within the gift of the house, and, one might say without fear of contradiction, the greatest and the most responsible position yet created in the drug trade of the country.

Born in 1861, in Marcellus Falls, New York, Mr. Ryan was educated in the public schools of Elmira, and then spent three years in the well-known pharmacy of Brown & Dawson, in Syracuse. In 1882, he entered the Philadelphia College of Pharmacy and was graduated two years later at the age of 23. Two or three years were next spent in various Philadelphia stores, and then he was made assistant professor of pharmacy in his alma mater. In 1898 he was given charge of the course in commercial training then established in the P. C. P., and in the meantime he had been made lecturer on pharmacy in the Woman's Medical College of Philadelphia. In June, 1900, Professor Ryan resigned all his connections in Philadelphia and went into the house of Parke, Davis & Co.

The secret of a man's success is never easily analyzed, but it may be said of Frank G. Ryan that he represented that rare, that ideal combination of technical knowledge and experience on the one hand, and business grasp and executive ability on the other. These qualities are all but incompatible, and he who unites them successfully has discovered a philosopher's stone. As president of Parke, Davis & Co., Mr. Ryan will be capable of understanding thoroughly every scientific detail of the vast business now confided to his care, and he will also exhibit that larger vision and that greater capacity for administration which will carry the house forward to conquests even more brilliant than those which have been registered in the past.

Mr. Ryan, accompanied by his daughter Helen, had returned from a seven months' trip around the world only a week or two before his election to the presidency. His main object was to further the interests of his house in Japan, China, and India, but he also visited Manila, Ceylon, Egypt, Paris, and London. In Manila an agency was established, which adds another to the considerable list of foreign branches now conducted by the house. In London, on his way back, Mr. Ryan was the guest of honor at two banquets attended by men prominent in British pharmacy and medicine, and when he landed in New York he was greeted at a large reception held at the house of Dr. Jokichi Takamine.



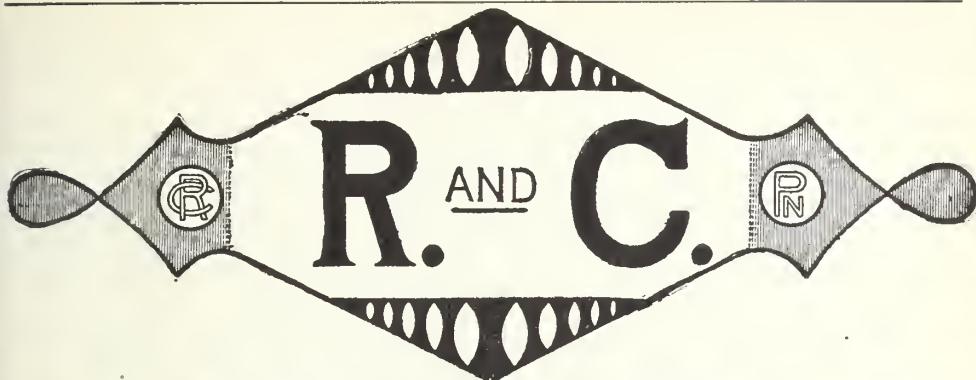
## NEURASTHENIA.

To-day it is generally recognized that neurasthenia is a real morbid condition. It is not the result of modern civilization, as many writers would have us believe, but an actual disease that has probably existed as long as society. The name is not a generic term and when so used implies ignorance of the real condition it describes. Instead, it represents a specific malady with a definite etiology, pathology and symptomatology. There can be no question but that the trend of modern life, particularly under certain conditions, tends to aggravate and multiply cases of this disease. Overwork is unquestionably one of the principal causes, coupled with anxiety, worry or persistent excitement. It is a fact that the nervous system or the mental economy of any person can stand only about so much. When overtaxed the results are bound to be disastrous, just as a muscle will suffer from excessive work. Add to overwork, individual habits, including excesses of all characters, and neuropathic tendencies which are all too often the result of hereditary influences, and it can be readily seen that nerve tire is of prime importance in the development of neurasthenia.

Within later years certain toxic states, such as syphilis, rheumatism, malaria, or the auto-intoxication of chronic constipation, have been recognized as important factors in the etiology of the disease. At any rate close study points to this important fact, that not one, but several causes unite to produce the group of symptoms ascribed to neurasthenia.

The prime object in treating this distressing condition is to restore nerve balance. Change of scene, regulation of the diet and correction of habits and faulty hygienic conditions are desirable features. But something more is always needed, and without the administration of some efficient tonic the neurasthenic will make little or no substantial improvement. The principal desideratum is to choose a tonic that goes further than mere temporary stimulation, one that will assuredly impart vigor to the nervous system, and at the same time assist each weakened organ in the re-establishment of its functions. Such a tonic is Gray's Glycerine Tonic Compound. Clinical experience has proven the therapeutic value of this well known product and under its administration the various conditions incident to neurasthenia are corrected and overcome. The nerve balance is restored, the digestive organs take up their work, normal elimination is promoted, and the various symptoms characteristic of nerve exhaustion are dissipated without the slightest evidence of undue stimulation.

Gray's Glycerine Tonic Compound moreover has this very important advantage, it not only aids worn out, tired cells and organs to do their work, but it does more—it helps them to help themselves. The results obtained, therefore, are permanent, not transitory.



DO YOU KNOW THAT

# PEPTENZYME

Contains the enzymes of all the glands, which go to aid digestion, and in the same physiological form and proportion as found in the human body.

It is the only preparation that contains the ferments of the spleen and liver.

Clinical results have proven its effectiveness over all other digestive ferments.

We should be pleased to send you samples and literature upon request.

**REED & CARNRICK,**

42-44-46 Germania Ave., JERSEY CITY, N. J.

## TEACHING A GIRL TO RUN AN AUTO.

Secure a good, easy-going machine with an active and up-to-date sparker, and having placed the girl firmly by your side, where you can secure a strong hold in cases of emergency, proceed to a lonely, unfrequented road where you will be uninterrupted.

If the girl display any signs of nervousness, do your best to soothe her. There are a number of ways to do this. Take her hand in yours and pat it gently. Speak to her in a low, soft tone. If absolutely necessary place her head upon your shoulder and count one hundred. If not effective, repeat in one minute.

Now she may take the wheel, advance the sparker and throw in the clutch. It will then be your turn to grow nervous. While the girl is clutching the machine you clutch the girl. It will then be time to rest. This should not take any longer than the rest of the afternoon.

By the time you have got so you can kiss the girl without getting nervous, she ought to be able to run the machine.—

TOM MASSON in the *October Delineator*.

## THE VALUE OF THE PURE FOOD LAW.

The New Pure Food Law enacted by Congress last June is one of the most far reaching and beneficial provisions ever inserted in the statute books of our country, and its effect will be felt by every class and condition of the people.

It is gratifying to know that when the Government, for the purpose of insuring purity by forbidding adulteration, says that a product must be exactly what its label represents, that you are not forced to make hurried changes in formula or label, but that the goods of your manufacture have always been conscientiously prepared and advertised—that the crime of misbranding has been left for others to commit.

Daniel's Conct. Tinct. Passiflora is derived by a process that has been in use for fifty years, from the cultivated may-pop, the fruit of the greatest sedative value known to medicine, and, as nearly every practitioner in the United States will testify, appeals directly to the nerve centers, allays irritation, restores neural equilibrium and eradicates every disease due to a disordered nervous system.

Since the enactment of the Pure Food Law, the so-called passiflora tablets and other spurious preparations purporting to be made from the may-pop have been withdrawn from the market, while the medical profession, recognizing the genuineness of Daniel's Passiflora is employing it far more extensively than ever before.

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In the treatment of the chronic skin inflammations, following in the wake of attacks of toxic dermatitis, attention to the general condition of the health, avoidance of anything irritating to the skin, a carefully selected diet and proper care of the skin are important features which must not be neglected. In addition, Battle's preparation of *echinacea augustifolia* and *thuja occidentalis*, which goes under the trade name of *Ecthol*, should be used both locally and internally; a drachm should be taken four times a day.—*American Journal Dermatology*.

# THE American Practitioner and News.

“NEC TENUI PENNĀ.”

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“Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.” —RUSKIN.

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## Original Communications.

### CHOLELITHIASIS.\*

BY H. A. DAVIDSON, M. D.,

*Professor of Diseases of Women, Physiology and Embryology,  
Hospital College of Medicine.*

LOUISVILLE, KY.

IT has been demonstrated by numerous post-mortem examinations that one in every ten persons carries within the gall-bladder, or the biliary passages, one or more gall-stones. On the other hand, only one in every two hundred ever realizes that he is the subject of gall-stone disease.

The question of gall-stones is as popular among the medical profession to-day as was appendicitis five or ten years ago. There are many radical men in the profession who claim that every subject of biliary calculi should be operated upon as soon as he is aware of their presence.

There are also a few who maintain that it is not a surgical disease at all but rightfully comes within the domain of internal medicine.

A few surgeons and many medical men think that there is and should be a middle ground, in other words that there are cases which are amenable to medical treatment, and a large number which should be turned over to the surgeon's care.

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\* Read before the Louisville Medical and Surgical Society, June 21, 1907.

Many patients dread an operation and are willing to regulate their manner of living and take prolonged courses of treatment throughout the remainder of their life time rather than go under the knife of the surgeon. Many patients have pursued this line of treatment and have eventually died of some other affection.

That such patients are taking a great risk is evidenced by the fact that nine-tenths of the deaths following operations for gall-stones were due to complications, the result of delay. In uncomplicated cases the Mayos in a large number of cases had a mortality of one-third of one per cent.

To illustrate what may happen in the region of the gall-bladder in cases of cholelithiasis, if operation is delayed, I will relate what I observed in one of the large surgical clinics of this country.

On the same afternoon it so happened that three cases of biliary calculi were operated upon in succession. In the first case a large stone had ulcerated into the transverse colon and illustrated beautifully how some large stones are passed from the bowel, not through the common bile duct, however, as the result of olive oil or any other medical treatment.

In the second case the stone had ulcerated partly through the wall of the duodenum and necessitated the closure of a fistula into the intestine. Such a case illustrates how some stones pass into the small intestine, and if a large calculus we can readily understand how it might cause obstruction at the ileo-cecal valve.

The third case was very interesting from a diagnostic standpoint and at least a half dozen different diagnoses had been made. A large tumor reaching from the liver to the umbilicus could be palpated through the abdominal wall, but the origin of the mass could not be made out. Upon opening the abdomen an immense gall-bladder was revealed which contained a single calculus as large as a hen's egg impacted in the neck of the gall-bladder. The bladder was at least six or eight inches long and three



inches in diameter, and no doubt would soon have ruptured.

Such cases in my opinion should be a warning to the physician who advises his patients not to submit to a surgical operation for their relief. In a ten or fifteen minutes paper it is of course impossible to take up all of the phases of gall-stone disease, so I will touch chiefly upon the treatment both medical and surgical.

In the first place gall-stones are simply the manifestation of a diseased condition of the biliary passages, and in order to accomplish a cure the cause of the formation of calculi must be removed.

It has been almost definitely settled that an infection of the bladder or passages must precede the appearance of stones. Colon bacilli, typhoid bacilli, staphylococci, streptococci, subtilis bacilli and probably other bacteria are capable of giving rise to calculi.

It is also an attenuated bacillus that produces the proper conditions in the bile tract. An antiseptic treatment would naturally suggest itself, and accordingly such drugs as salicylic acid and acid sodium oleate are used with apparently good results. Such drugs would be useful in causing a latency of the infection and give relief to the patient while under treatment.

Olive oil is still recommended by a few physicians for the removal of stones. Many, especially those composed chiefly of cholesterin, but not all stones can be dissolved in a test tube of olive oil, but unfortunately we cannot fill the gall-bladder and bile ducts with this valuable remedy.

If olive oil is given to any one with a scanty biliary secretion, oleic, palmitic and margaric acids will unite with lime and form concretions which when passed from the bowel are often mistaken for biliary calculi.

The Carlsbad treatment has probably been more faithfully tried than any other. By stimulating peristalsis, increasing the blood supply to the liver and diluting the biliary secretions it certainly causes the patient to feel better, but it doesn't get rid of the stones. In the surgical

treatment of cholelithiases we aim first to remove the stones and then by drainage cure the infection which is probably of more importance than the mere removal of the caculi.

To illustrate the surgical treatment of gall-stones I will report the following case which is typical in some respects.

F. R., age 27, male, white, was admitted to the hospital November 8, 1906. His occupation was that of a clerk, he having lived in this country five years, his birth place Germany. His family history was negative. For last four years he had been troubled with indigestion. His habits were moderate but he had had gonorrhea which was apparently cured. Two years ago he had an attack of severe colicky pain in the region of the gall-bladder; he vomited, had fever and the attack lasted two days after which he felt all right. He had recurring attacks of a similar nature at intervals of two or three months. Last severe attack occurred July 12, 1906, at which time he was badly jaundiced and stools of a light clay color. The jaundiced condition persisted until the last of September. During the past year the patient has lost forty-five pounds. Upon examination his lungs were found in good condition. He was admitted to the hospital during an attack similar to the preceding one.

The patient was prepared for operation and on the following day, November 9, at 1:30 P. M., I operated upon him. A sand bag was placed under the back in the region of the liver to bring the gall-bladder and biliary passages closer to the abdominal wall.

A longitudinal incision three or four inches long was made through the outer edge of the rectus, beginning at the costal cartilage of the ninth rib. Upon opening the peritoneum the gall-bladder was found bound down by adhesions which were thick and numerous.

Stones were felt in the bladder. The adhesions were broken up and the resulting profuse hemorrhage having been stopped by hot pack, the gall-bladder was brought up into the abdominal wound, thoroughly walled off from

the surrounding peritoneum and opened at the fundus. The bile and mucous secretion were emptied from the viscus and the finger introduced to explore the contents. Thirteen small and one large stone were removed from the neck of the gall-bladder and the cystic duct, and one large stone was found lodged in the first part of the common duct. Fortunately I was able to push this stone back into the bladder and remove it.

The hepatic, cystic and common ducts were then explored digitally and found free of calculi. To make sure of a free passage way to the duodenum a probe was passed through the cystic and common ducts into the duodenum.

The fundus of the gall-bladder was then stitched to the peritoneum and rectus muscle, and a rubber tube was introduced into the bladder down to the cystic ducts. A cigarette gauze drain was introduced down to the oozing surface outside the bladder where the adhesions had been torn loose and brought out along the side of the rubber tube.

The abdomen was then closed in the ordinary manner. The gauze drain was removed in a few days, the rubber tube being left for several days longer. A few days after operation the patient was feeling perfectly comfortable, the tube discharging bile freely. On December 9, one month after operation, the patient left the hospital cured.

#### DISCUSSION.

DR. HENDON: I am very much interested in the paper that Dr. Davidson has read for us on this very lively subject of gall-stones. As a matter of fact it probably contains as many features of interest and attractiveness as any other subject now before the surgical profession. It is only proper under conditions of this sort to allude very briefly to a few of them.

The etiology of the disease is practically established—established enough for all practical purposes. The most important consideration now I believe is the symptoms of gall-stones. At the Southern Surgical Association which met at Baltimore, in December, we heard Robert Morris read a paper the title of which was “gall-stones without symptoms and symptoms with-

out gall-stones." We need not look for a classical group of symptoms. We frequently find these stones present without any real well developed indications of their presence; people have gall-stones and their presence is manifested by indigestion and dyspepsia as much as anything else. I always look with very grave suspicion upon any person who presents any history of long continued stomach trouble.

One of the main features of interest in this connection are the complications that take place. The work of Opie has revealed that in most every case of gall stone we have some pancreatitis, thereby causing the disturbances of digestion.

In an ordinary case of gall-stones where you can make out a tumor and where we simply have a sack filled with these calculi, the proposition of removing them is just as simple as pouring the marbles out of a bag. But the contingencies that are liable to occur afterwards in the way of stones lodged in the common duct, producing biliary fistula and adhesions around the common duct, are all subjects of the greatest importance and are really the ones that demand our most careful attention. No man ought ever to open the gall-bladder without a thorough exploration of the common duct, because it is there that we get a great amount of trouble in the way of fistulæ, and patients failing to be relieved of the trouble for which they come to us. Now, the method of technique in exploring the common duct is familiar to most every one who has paid any attention at all to the subject. Probably the manipulation that has done most to simplify this problem has been the support of sand bags and various other contrivances beneath the thorax and the long or high incisions by Mayo Robson which commences almost up to the ensiform cartilage. When we remember that the fundus of the gall-bladder is about the tip of the ninth costal cartilage we make an incision from that point downward, then the upper angle of the incision exposes the fundus; if we make a high incision we have the fundus of the gall-bladder in the middle of the incision and it is more readily reached.

Dr. Davidson told us that in his case he was able to pass a probe down through the cystic duct into the common duct. Those who do a good deal of this work will bear me out in saying that it is only in exceptional cases that we are able to do this. The cystic duct is "rifled" if you please, and in endeavoring to pass a probe through the duct it would catch on the mucous membrane. Probably the best way to explore the common duct

is to open the common duct, first placing a bridle on either side of the point where you intend to make the incision, lifting up and opening and exploring with an olive pointed bougie the same as is used for the detection of a stricture of the urethra. That will pass through the duct oftener than anything else.

Now, the point about the treatment of the disease is that it is never the operation that kills people ; it is the complications that exist and the complications that have been allowed to overshadow the original condition that produce death. Those people who recover without the use of surgery do so by a fortunate accident. When the gall-bladder becomes adherent to hollow viscera and the gall-stones are discharged into the viscus, even then the dangers are not at an end. We are all aware that the majority of enteroliths have a gall-stone for a nucleus. We are also impressed with the enormous mortality which attends obstruction of the bowel by an enterolith. I believe that the mortality is fifty per cent in that particular kind of obstruction.

Now, I have a specimen here from which I would like to illustrate a typical case. This was a case referred to me by Professor Barbour. The patient was a woman about 45 years of age who two years before had sustained a fall. She fell upon the right side across a tub or back of a bench, I forget which, and from that day forward she began to suffer pain. She had no well defined colic or any well defined gall-stone crises that we often see, but following that she had an attack probably of a circumscribed peritonitis and a mass formed in the right side. After two or three weeks sickness she discharged a quantity of pus through the bowel. Then the tumor subsided and she recovered, but she continued to have recurrences of like attacks at irregular intervals until finally she came to operation.

My diagnosis was an abscess of the liver that had attached itself to an adjacent viscus. Upon opening the abdomen, however, the gall-bladder presented and we found it full of stones, probably two hundred of those small stones. There was a fistula connecting the gall-bladder with the hepatic flexure of the colon. Now, she had never been jaundiced and we were unable to ascertain that she had ever passed any gall-stones.

I wish merely to allude to another case in which gall-stones were never suspected. I was called to operate for an abscess of the appendix. After the first attack a well marked tumor appeared in the region of the appendix and we removed fourteen gall-stones from the gall-bladder.



I wish to allude to one important point that Murphy called attention to, and that is the rigidity of the diaphragm. If the surgeon's fingers are pressed beneath the ribs it is impossible for the patient with gall-stones or cholelithiasis to take a deep inspiration.

DR. J. R. WATHEN: I listened with a great deal of pleasure to Dr. Davidson's paper. I think it is the best paper we have had before the Society for quite a time. It discusses the subject from a clinical standpoint. It is well for a man to come before this Society and talk theory, but when a man presents pathological data that we can work upon as Dr. Davidson reported and the gentleman discussing the paper, it gives us food to discuss. In fact it gives us so much that I think Dr. Hendon, the leader of the discussion, has left little for me to say.

There are one or two points that I would like to speak to. One is that the mortality of gall-bladder surgery in the hands of the best surgeons is remarkably low. Now, in view of this fact how much lower could we make it if the diagnosis was made early and the patient operated upon? Mayo has called attention to the simple points of diagnosis, and to-day we know that many of the neuralgias of the stomach are simply cases of gall-stones or gall-bladder infection and therefore demand surgery. In fact in making a careful analysis of seventeen hundred cases he has come to the conclusion that pain in the upper abdominal region demands operation whether due to gall-stones, duodenal ulcer or gastric ulcer. Operation is the only thing that will relieve. He also lays stress upon the fact that it is not so much the particular lesion that we have to deal with in stomach or gall-bladder work, but the drainage of the infection as anywhere else. It is the infection that is the factor that should be considered in these cases and drainage is the remedy in every case. This fact should be emphasized to the general practitioner.

Dr. Hendon has brought out the fact of overlooking gall-stones in the common duct. When I saw Dr. ——— he was doing some work in exploring the common duct. As you know he was the first to suture the common duct. His technique as outlined by Dr. Hendon was used in the operation, and he introduced a bougie into the common duct and brought it out through the diverticulum of vater; it could be felt through the wall of the intestine, doing away with the exploration by ——— method. In order to understand the anatomy of these parts we should study the work of Mayo Robson. I exhibited at the State

Society some radiographs in which I had introduced some pieces of lead into the gall-bladder and radiographed them.

I filled up the gall-bladder with pieces of lead and also put some pieces in the bile passages and then I radiographed these in that situation. In some material that was turned over to me at the City Hospital I found it quite difficult to explore the bile ducts, and I think it is a more difficult operation than the essayist has led us to believe.

As brought out by Dr. Hendon many patients are operated on for gall-stones and are not relieved because the stone is located low down and may be overlooked. I operated on a case recently where I opened the abdomen, felt the gall-stone and took it out, but upon careful examination could find no cystic duct to this gall-bladder. It was a large stone. Upon careful exploration and breaking up of the adhesions I found the real gall-bladder with other stones. This stone had ulcerated through the wall of the gall-bladder. These stones will wander out of the region of the gall-bladder.

As regards drainage, I differ with many of the local men. Many surgeons wish to get their patients out of the hospital. If I understand Mayo Robson and Moynihan the point they insist upon is long continued drainage. I believe that the gall-bladder should be drained for at least two or three weeks after the stones are removed. We cannot get the gall-bladder free from pus in any less time. It is drainage that we want in successful treatment. I believe if the wound is not allowed to heal too soon we will have but little trouble.

There is little that I can add. Many points were brought out of value in this line of work. I hope that the practitioner of to-day will make a diagnosis and turn the patients over to the surgeon. When that is done the mortality from gall-bladder surgery will be less than that from any operation done.

DR. GUEST: Since Dr. Hendon mentioned the subject of Robert Morris' paper, "gall-stones without symptoms, and symptoms without gall-stones," I want to report a case that comes under the latter part of that title. When I was assistant to the chair of surgery at the Louisville Medical College, an outdoor patient, a woman aged 45 came in markedly jaundiced, and the diagnosis of gall-stones was made. I was asked to prepare her for operation by purging and so on, and when the professor operated two days later I assisted him. Upon cutting down on the gall-bladder we found it distended, but it did not have a

single stone in it. He explored the common and cystic ducts but could not find a single stone. He, however, drained as Dr. Wathen said and left the tube in eight or ten days. The jaundice cleared up very nicely and the woman made a beautiful recovery. I know it is customary for surgeons to speak of an uneventful recovery. I will say of this patient that she got well of gall-stones without having them.

DR. DUNNING S. WILSON: This seems to be somewhat of a surgical feast and it does not leave much opportunity for the general practitioner to say anything, except to thoroughly endorse the attitude of the surgeons in regard to the treatment of these cases. It seems to me that it is simply ridiculous to consider gall-stones *per se* as anything but a surgical condition.

The point that most interests me of course is the diagnosis. If the diagnosis of gall-stones can be made I think the outlook for recovery is very good if the patient is turned over to the surgeon. The difficulty with me has been, in the first place, to determine the presence of gall-stones early, and in the second place, to state to the patient or to know exactly at what time the surgeon should be asked to operate. I am personally somewhat opposed to have the surgeons the consultants these days which seems to be the fad. I prefer as far as I possibly can to make a diagnosis and determine whether the case is one for operation, and have the surgeon come in and confirm this. I have seen a number of cases which struck me as being gall-bladder disease. I really have a preference for the term "gall-bladder disease" or "gall-bladder infection." I do not think we should use the term "gall-stones," as the case reported by Dr. Guest illustrates.

I am not prepared to accept the sweeping statement made by Dr. Wathen in regard to operation where there is pain in the region of the gall-bladder, the pyloric end of the stomach or the duodenum. I think that is going too far. Be that as it may we should be very careful in withholding from our patients operation when necessary.

Some of the gentlemen touched upon the point of pancreatitis. This is a new subject to a few of us and I may be mistaken, but I inferred from the remarks of Dr. Hendon, particularly, that the pancreatitis is primary to the gall-bladder trouble. I am rather inclined to believe that in cases where we find pancreatitis coincident with gall-bladder disease it is simply because of the fact that the pancreas is partaking or has partaken of the infection in that region.

From the standpoint of the physician I want to emphasize Dr. Wathen's idea of drainage. While gall-stones may be found, oftentimes there are no stones present when the patient is operated on, and for that reason I think we should speak of the gall bladder as an infectious gall bladder, and drainage is the method par excellence of removing this infection.

I wish Dr. Davidson in closing would speak to the point as to when the patient should be operated on.

DR. POPE: I only wish to add a few remarks to the terminal stage of this paper. I see, properly speaking, few cases of gall-bladder disease primarily, but I have seen quite a number of cases that have had gall-stones or "gall-bladder disease" and have been operated upon, and it may be because I have seen these cases post-operative that my experience has been somewhat pessimistic. It may be that it has been my misfortune to see only those cases that are failures, but I have now gathered the statistics of a number of cases and have carefully studied them, studied them with a view to the condition of the patient and the post-operative condition that followed. They come under the term neurasthenic. They are the broken down type of humanity. I have found in these a peculiar condition that for want of a better name I have called lithia, that is to say a tendency toward the formation of crystalline substances, or what Haig would term the uric acid diathesis. I dislike using the term uric acid, because I do not believe uric acid is the cause of the trouble. But we find these cases markedly anæmic, of low hæmoglobin count, a large number of microcytes and a marked degree of polyleucocytosis. The urine is loaded with uric acid crystals. I have found that their nervous systems are exceedingly run down; they are irritable and suffer from digestive disturbances. As a rule they are obstinately constipated. Some of the cases I have seen are the most difficult ones with regard to securing a proper hygienic condition of the bowels. These cases build up slowly. They look bad. They have an appearance about them that to my mind is almost typical of the condition. They are very subject to painful manifestations of a neuralgic nature in other parts of the body.

Now, I mention these cases simply because in the last four or five months I have gathered together a number of them. They form a small per centage of the cases that have been operated on for gall-stone disease, but we should at least take into consideration these facts, for these cases may be those par-

ticular ones in which the general practitioner or whoever had the case is at fault, in that he did not operate early enough and allowed the case to go to such a point that the patient could not be relieved. That I do not know, and therefore of course it would be unfair to judge.

DR. ABELL: In regard to the indications for an operation, I would simply answer that in one simple sentence, that is when the gall-bladder gives trouble. As long as the stones are not giving trouble we do not know whether they are present or not. When symptoms arise from the presence of gall-stones they should be removed.

There are one or two points that were brought out in the discussion that are of extreme interest. I cannot possibly conceive how gall-stone disease, unless it be extremely severe and protracted, could produce the late results that Dr. Pope mentioned. Of course in his line of work these are the cases that would necessarily consult him. In those instances where the infection has lasted for a long time, where the lesions involve surrounding structures you can understand why the patient would develop neurasthenia. I do not possibly see how you could ascribe it to the operation. I do not believe that there is a chapter in operative work that is as brilliant in its results as gall-stone work, not excepting appendicitis or any other. As to the operation itself, I am heartily in accord with what has been said in regard to drainage.

As far as exploration is concerned, I would prefer the finger to any probe in determining the presence or absence of gall-stones. I recall one case operated on yesterday afternoon in which there were two stones impacted in the intraduodenal portion of the duct in which they could be plainly felt with the fingers.

A point that is attracting interest at the present time is the line of life the patient should follow to relieve the general conditions about the liver that would tend to the formation of stones or the inviting of infection. That gall-stones do form, not necessarily in the gall-bladder, but in the common duct and the hepatic duct as well has been positively proven. I have at the present time a case on hand in which I am satisfied six stones were removed from the hepatic duct. I could introduce a probe into the hepatic duct for eight inches.

Personally I do not believe that the reformation of gall-stones occurs. When the patient has to have a subsequent operation



it usually means that the stones were left at the previous operation. That is one reason why it is hard to explain why patients do not get well after the stones are taken out. If the operation is a complete one I do not see why the patient should have the train of symptoms that Dr. Pope describes. You can readily understand if an incomplete operation was done, or there was an abstraction of the duct or stricture that the symptoms would persist, but with the ducts clear and the infection relieved I do not see how the symptoms could persist.

DR. POPE: I do not wish the doctor to understand me as casting a reflection upon surgery in gall-bladder work. I just want to speak of these cases not reflecting upon surgery in this disease or any other field.

DR. DAVIDSON: I wish to thank the gentlemen for their free discussion. Dr. Hendon mentioned the fact of gall-stones without symptoms. One of the cases I reported had a stone the size of a hen's egg and she had no symptoms at all until one week before she was operated on. I think that illustrates that point nicely. He mentioned the fact that in order to explore the common bile duct he would prefer to open it. It is well known from the statistics of all the surgeons who have done much gall-bladder work that if the common bile duct is opened it increases the mortality considerably. That is shown by the statistics of thousands of cases and by Mayos' fifteen hundred cases. I hardly think it advisable to open up the common duct just to explore it. I think by digital examination and the use of the probe we can explore it.

Dr. Guest mentioned the fact that he had seen a case of gall-bladder trouble operated on and no stones were found. From the history of the case I should call it a cholecystitis. Dr. Wilson mentioned the fact that we ought to call all of these cases gall-bladder infections. We have an infection of the gall-bladder and may have no stones present, we call it cholecystitis.

Dr. Wilson referred to pancreatitis. In these cases the pancreatitis is usually due to the obstruction of the pancreatic duct, or rather an obstruction of the common bile duct in the region of the pancreatic duct, so that the bile in some cases gets into the pancreatic duct and up into the pancreas and causes an acute pancreatitis. These cases have been known to cause carcinomatous disease of the pancreas.

In the class of cases that Dr. Pope mentioned they would probably have had this neurasthenia even if they had not been

operated on. Probably the fact that they were operated on and had an incision in the abdominal wall gave them something to lay the blame on.

In regard to Dr. Wathen's question, "why are there more cases of gall-stones in women than in men?" I think one reason is that women wear corsets which compress the liver, and in pressing the liver they interfere with the circulation through the liver and cause stagnation of the bile. This is put down as one of the causes of gall-stones.

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### TUBERCULOSIS OF THE BLADDER.

BY J. M. SLEICHER, M. D.,

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MISS M; aged 29 years, unmarried; saleslady for the last 10 years; arrived in this city the latter part of January. She complained as follows: Constant pain in the supra-pubic region, but greatly aggravated when on her feet; when in the recumbent position she is greatly relieved. Frequent desire to urinate, has to get up at night from five to ten times. The pain radiates downward and centers in the right labia majora. She said, "I am getting nervous and can hardly contain myself, am really afraid of losing my mind." Her mother died when she was quite young, has one sister in good health; her father is well advanced in years, but suffering from tuberculosis, but this patient never lived in her father's family. I am familiar with this case since 1896, and have treated her at various times for different ailments. In the early part of 1896 she suffered from neurasthenia caused from overwork and from her then anemic condition. She then improved rapidly and after having had a six weeks vacation which she spent in the country, at the expiration of her vacation she resumed her position. During the following winter she contracted as she said a severe cold, her cough persisted until sometime in the early part of spring, and in 1897 she consulted me about her condition. During the examination I found her left lung affected; upon a microscopical examination of the sputum found the tubercle

bacilli. I put her upon the usual treatment for such trouble and continued during the summer of the same year. She improved up to late in the fall when she took another cold as she said from undue exposure. As the winter and spring are very severe in Wisconsin, where we both lived, I sent her to Colorado where she remained for about a year. While there she gained some 30 pounds and her cough ceased, so she returned to Wisconsin and resumed her position, apparently enjoying good health for two years. In 1900 she consulted me for some vesical irritation; found the urine clear but highly acid. I prescribed for her, and in a few days she was free from the trouble. During the next succeeding four years this bladder trouble would return about every four or six months, but under the same treatment as before, combined with creosote and quaiacol she always succeeded to find relief and free from the trouble for another space of time of about four or six months duration. However, in 1904 I left Wisconsin, did not see her until August 1905, when I met her in Chicago, when she again was severely suffering as she termed it from her "old trouble." I prescribed for her then and she left the same day for some summer resort in some town in Michigan. I did not see or hear from her until late in the fall in 1906 when she learned of my location here. In January, 1906, she was operated on at the Presbyterian Hospital, Chicago, for appendectomy and salpingo-oophorectomy on the same side and salpingectomy on the left side as well as ventral fixation. After leaving the hospital she improved, but shortly thereafter, in a few weeks, the vesical irritation returned and from that time up to the present day she was seldom free from pain, only relief as to severity. She resumed her position some time in July of the same year, but was hardly ever able to perform a full days work owing to the vesical tenesmus.

After arriving in this city last January I treated her medicinally and topically, that is irrigation of the bladder (the method of treatment is described in a former article published in December, 1906, number of this Journal). She did not improve; on the contrary she gradually got worse.

I now got her consent to enter the hospital and made a thorough examination while under an anesthetic, using the method of "indirect inspection" or what is termed cystoscopy, but owing to the ventral fixation which was performed a year previous the bladder did not have space to fully balloon, consequently the examination was not as satisfactory as it ought to have been. I touched the few spots which were noticed to be erosions with a solution of nitrate of silver (50 per cent) and immediately followed with a douch of warm normal saline solution. At the same time I removed the right gland of Bartholin which was hypertrophied. In a few days the same pain returned. I told her perhaps in a short time it would all pass away, but should it, however, be a vesical calculi which might be partially imbedded and coated escaped inspection owing to the condition as stated above, the ballooning was not complete. She was disappointed but perfectly willing to submit to a supra-pubic incision with a view to explore the bladder and extract them from any calculi present. A supra-pubic cystotomy was performed; no calculi or abnormal growth found, except on the posterior wall, including nearly one-fourth of the whole area of the mucosa, which was studded with grayish tubercular nodules and arranged in regular parallel rows. Noticing these and knowing her general condition I curetted them out and cauterized the parts with phœnic acid following it immediately with alcohol. Had I not known her tubercular condition I should have excised that portion of the affected mucosa, which I shall more fully explain below why I did not. We made drainage into the vagina by a vesico-vaginal fistula which gave rest to the bladder. She remained in the hospital three more weeks, then left for the east, living with her sister, not well, and no doubt in my mind the prognosis unfavorable, as she has in addition to all appearances and symptoms a well advanced tuberculosis of the liver. She suffers from perihepatitis; nodular formation can be outlined along the course of the bile duct. Such is the history of our case briefly stated from the first appearance of tubercular trouble to the present

time. We shall briefly discuss this subject in the following manner: (1) Definition. (2) Pathology. (3) Etiology. (4) Symptoms. (5) Treatment.

A better definition than its name implies cannot be given, namely a tubercular condition of the urinary bladder. It is a communicative infectious disease, either primary or secondary in character, rarely the former and not often found in the female. Tuberculosis is the most universal disease prevailing in all parts of the world, at all seasons and among all races. It is not confined only to man but attacks also many of the lower animals, even fowls and fish are not exempt. No wonder it is called "the great white plague." Among the human family it is more destructive than all the other communicable diseases combined. Statistics say that 14 per cent of the entire mortality is due to this disease. No doubt this is rather a low per cent, and should we have an exact compilation of mortal statistics and a strict diagnosis in all cases where there is a taint of tubercular infection, which perhaps in many cases is most prominent at dissolution, the per cent would materially increase. Every organ and tissue of the body is liable to it, and no doubt many a person succumbs through this disease not recognized in ante-mortem times. I may be rather harsh upon my brother practitioners, but nevertheless, we have many diseases affecting various organs of the body simulating other diseases. For want of time I shall mention but one example, thus: tuberculosis of the pericardium is more often wrongly diagnosed than correctly so. In this condition we have a thickened pericardium, more or less completely adherent, causing a hypertrophic and dilated condition of the heart, thereby causing a valvular insufficiency, and on account of this and by its blowing systolic bruit, which is often heard at the apex, is diagnosed either as a stenosis or an insufficiency superinduced by some other disease. We may also mention tuberculosis of the liver and spleen, etc.

Pathology in this case is the same as the pathological condition of other tissue in the body affected by the tubercle bacilli. Suffice it however to say the old time



partially translucent, grayish white nodules or tubercles were present in abundance and in regular arrangements from the fundus to almost within the urethra. The mucosa adjacent to the nodules was not inflamed, which is characteristic to this disease. They were more abundant and more necrotic around the trigone. After the tubercle bacilli gain entrance into the tissues they multiply very rapidly. The nutrition of the tissues by the toxins result in the production of these tubercles or nodules which are the result rather than a part of the disease process.

This tubercle formation is an effort on the part of nature to shut in as it were the bacilli from the surrounding tissues. These nodules were necrotic and when touched easily tore without bleeding, which condition is evident that they do not contain or are provided with blood vessels, hence its nutrition is poor and degenerative changes soon occur. The bacilli are not content to remain in the sub-mucosa, but invade the deeper tissues and are found in the muscular as well as the peri-vesicular and peri-rectal tissues forming abscesses. These inflamed tissues are a fertile field for other pyogenic bacteria, notably the colon bacilli. Our patients had multiple abscesses opening into the bladder after the supra-pubic cavity was opened. At this place we may mention the diagnostic method called Wright's "opsonic index." Suppose the normal "opsonic index" is 1.0 or in other words the "phagocytic index" of a normal individual were 4, and by his method of finding the "phagocytic index" of a tubercular patient were only 2; then we have the formula of the actual ratio being 2:4 or 0.5:1.0, hence we have the normal "opsonic index" as 1.0 and the "opsonic index" of the tubercular patient as 0.5. In localized tuberculosis affections the opsonic index is continuously low, while in general tuberculosis the opsonic index shows great fluctuations, owing to the fact that a general tubercular patient is continually inoculating himself, and from time to time a greater absorption of toxins and a greater stimulus to the production of protective substances in the blood. Hence by employing this method of examination and his treatment

we may accomplish results in this line formerly thought to be impossible. I am aware that this method is new and in its infancy, but sufficient research work has proved its worthiness of still further trials and investigations.

*Etiology.*—There is but one etiological factor in these cases; namely the tubercular bacilli. The only question arises how did they get there? It is beyond a doubt that our case is one of secondary infection as she has a positive history of tuberculosis of the lungs. We have two classes, a primary and secondary infection. As stated above, primary infection is a rare thing, but if so, how does a primary tubercular foci start in the urinary bladder? If our patient had been a male the mode of infection could be readily explained by having coitus with a female whose vagina suffered from tubercular infection, and the bacilli having an open highway to travel unmolested to the bladder, and the seat of infection would have been located just inside of the vesicular urethra. In the same way under similar conditions the female can be infected from the excretions of an infected male whose prostate gland, seminal vesicles, or epididymis is tubercular. The bacilli will find the way easy as the female urethra is short and of easy access. Another source of primary infection is by instrumentation, notably by using a catheter infected or contaminated with the bacilli. I am sorry to say we have still men in our ranks who catheterize patients without sterilizing the instrument; this has been my lot to observe; such an attempt was made in my presence but a short time ago, but for my timely interference he would have catheterized his patient without sterilizing his catheter. Still another mode of carrying the bacilli is by unclean hands or fingers or even contaminated linen, depositing the germ to such proximity that they can gain easy ingress to those parts through the urethra. Physicians, nurses, patients, as well as the public in general, should be very careful in these details when handling tubercular patients or the excreta from them, especially the sputa. At this time may be mentioned the much needed changes in our marriage laws as they stand upon our statute codes

in the various States. Every applicant for a marriage license should be refused until both parties to the contract can produce a certificate from a board of medical examiners, consisting of at least three reputable medical practitioners whose duty should not be only to make a clinical examination, but also a thorough microscopical as well from the various excretas of the organs of the body. Such a board should exist in each county of every State in the union. Until such restrictions are imposed we can not hope to avoid infection from that source. We have observed too often a healthy robust person who was one of the contracting parties become infected from his or her helpmate and were cut down in the prime of life and perhaps bestowed a weakened immunity upon the offspring of such an unsanitary, yes, unholy alliance.

*Secondary infection.*—We have three distinct avenues by which the bacilli gain entrance to the urinary bladder. The *ascending*, the *descending* and the *intermediate* route. The first or ascending is from an infected tubercular testicle, seminal vesicle epididymis or prostate gland in the male, and from the vagina or even rectum in the female. The bacilli are usually carried through the blood stream or the lymph vessels, and finding their favorite lodgement in the sub-epithelial connective tissue.●

The descending avenue is from the infected or tubercular kidney through the ureter. If the foci of the mucosa is located around the ureteral orifice in the bladder, we are sure that the kidney is at fault, and such foci or tubercular nodules or ulcerations located at the right or left orifice will show which kidney is affected. Can these bacilli travel from the kidney to the bladder through the ureter without inflaming them? Yes, post as well as ante-mortem investigations demonstrated this fact. We can have a tubercular kidney with a corresponding tubercular mucosa around its ureteral orifice with a perfectly healthy ureter between the two focal points. Most generally we find the inflammation extending along the whole course of the ureters, and again only in intervening spots or foci. Another descending route is via the lymphatics. We find

the trigone and the base of the bladder contain a network of sub-mucous lymphatics which freely anastomose with other lymphatics similarly situated in the ureters and kidneys as well as those from the prostate gland. Bacteria travel from old focus to new ones chiefly, if not wholly, through the lymphatics. They do not require a prior pathological lesion on the mucosa in order to plant themselves, but are capable to build their own abode on a healthy tissue; but in a great number of cases an inflammation is preparing the soil for the tubercular bacilli is very striking in those cases which begin as acute gonorrhœa, drag on slowly as chronic gleet and finally terminate in frank tuberculosis of the prostate or the trigone.

The intermediate route, we have reference to the general circulation, which is perhaps one of the most possible ways of infection. Also from direct extension from contiguous organs or tissues such as tubercular peritoneum, intestines, Fallopian tubes, ovaries, vagina, not even the appendix excepted. Our patient had undergone an operation a little over a year ago as above stated. I was unable to obtain a report of the pathological examination of these specimens, but I am free to infer that the lesions in these parts played an important etiological factor in this particular case.

*Symptomatology.*—The symptoms are usually not well marked in the early stages; the onset may be so gradual that the disease is well developed before it is recognized, and usually declares itself first by one or two symptoms, either irritability of the bladder or hematuria. The onset may be spontaneous or provoked by the use of instruments in the urethra. Hematuria of tuberculosis is usually characteristic and is a prominent symptom of this disease first and last. It is rarely if at all influenced by exercise or jarring as is the case in vesical calculi, nor is it as free as in cases of neoplasms. When first noticed by the patient is when a few drops of pure blood, after urinating, are squeezed from the base or neck of the bladder by its own contraction. The urine which is next passed is usually red with blood, the bleeding may continue for a few hours or

even days, and then stop however to recur after an interval of days or weeks. The urine however is not always clear during this interval; it may be smoky, but when clear and even sparkling the microscope will almost invariably detect a few red blood cells, and as well as a trace of albumin. The bleeding is never very severe unless it is stirred up by the introduction of instruments into the bladder.

Irritability is characteristic in the frequency of urination and the pain accompanying is often the earliest and most distressing symptom, usually more so at the end of urination. The effect of this pain is to excite a stronger spasm of the bladder which results in an increase of the pain, and this pain and spasm may persist until the next time of urination or it may pass off and leave only a soreness.

After ulcers have formed and a mixed infection has occurred another pain is felt, a pain before micturition, which is often irresistible to pass urine, and when not acceded to will pass a few drops involuntarily down the persons thigh in spite of himself. These spasms constantly decrease the capacity of the bladder and increase the frequency of urination, hence the patient has no peace day and night. The urine of tubercular cystitis is acid, no matter how foul and ammonical, full of shreds of blood, mucus, and stringy clots the urine may be, the one striking characteristic is its acidity. In making our microscopical examination of the urine of this patient we found blood cells, vesicle epithelium as well as tube casts. We may have incontinence of urine from spasm or from ulceration of the neck of the bladder. In mixed infection we have pyuria, phosphatic stone may be formed and multiply the patient's agonies. Involvement of other genito-urinary organs may sooner or later develop rapid pulse, hectic fever and general decline.

Prognosis unfavorable, yet recovery is possible, though rare. If the disease is a primary one recovery is possible, but if secondary in origin extension from other vital organs it is of irregular, slow, and progressive, may last a



long time, usually the patient succumbs to the combined toxins of a mixed infection.

*Treatment.*—Conservative treatment of tuberculosis of the bladder is preferable to any of the radical methods that have been employed. It should be the aim of the surgeon to let the bladder entirely alone and confine the treatment to climatic, hygienic, dietetic and tonic, which is appropriate to tuberculosis of any organ. No matter if local or operative treatment is required, hygiene is always the “power behind the throne” of a cure. Among tonics we may mention cod liver oil, creosote and quaiacol are the true and tried remedies. Nuclein either hypodermically in 5 per cent solution or by stomach, about 4 grammes daily. You can also use about a 50 per cent solution as intravesical injection. Ichthyol and ichthalbin administered internally have been highly lauded, but I have had no experience with their use. Balsamics and alkalies to modify the urine and soothe the bladder. Urinary antiseptics are absolutely useless. Local treatments are contra-indicated, except when the case is well advanced and then use drugs which are best borne and give the most comfort, irrespective of curative power. A solution in olive oil of a 25 per cent to 100 per cent quaiacol valerinate or from 3 per cent to 12 per cent watery solution of thallin sulphate. Professor Senn, the elder, suggests trichlorid of iodine from 2 to 5 per cent as well as the iodoform-glycerine emulsion in about 10 per cent strength. Perhaps the most soothing is a solution of bichloride of mercury from 1 to 5,000, or even 1 to 20,000, and next the quaiacol valerinate solution; both are very healing; however, if nothing else gives relief the thallin solution will be very efficacious.

Indications for operative interference are: (1) To relieve symptoms by establishing continuous drainage to allow the bladder to rest. (2) To cure the disease by topical applications. (3) To remove the diseased tissues by cautery, curette, or knife. It is rarely possible to remove by knife all the diseased tissues since the primary focus is usually located in some other organ of the body, and as the oldest lesions are, in most instances, located about the trigone

where they can least well be excised of the parts involved as stated above. We must admit that operative failure entails dire results. The patient may be relieved from dysuria, but will always have a permanent tubercular fistula. However, if the operation was performed as a last resort and such a permanent fistula was in view and such facts thereof fully explained to patients they can well be satisfied, but should the surgeon have failed to explain in detail and the patient suffering from a foul fistula, a leg urinal and a filthy bed the surgeons gratitude will be slight, more often condemnation and damnation. Early operation should never be performed except when complicated with phosphatic calculi when this latter should demand surgical interference. Extirpation of the whole mucous membrane have been resorted to, but the results have been unsatisfactory. In some cases excision of tubercular ulcers have affected a cure, but whenever such was the fact, they must have been of primary origin. Medication through supra-pubic wounds has resulted in excellent results in obtaining relief, and a few apparently cures, but usually it is disappointing. Galvano-cauterization has often proved beneficial, yet however this method is in its experimental stage, but deserves a proper and thorough trial before condemning it; no doubt if properly used will produce excellent results.

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### ABDOMINAL PREGNANCY.

BY JOHN EGERTON CANNADAY, 'M. D.,

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[An abstract from a paper published in the New York Medical Journal.]

AFTER discussing the history of the lesion so far as the surgical knowledge of it is concerned, the author states that only during the last fifty years has its treatment been worthy of consideration. Lawson Tait has been the pathfinder in this as in some other subjects. The statistics of frequency vary according to the count of different observers. About 8 per cent. of all cases of

extra uterine pregnancy are said to be adominal in character.

The symptoms are divided into those common to all varieties, and those peculiar to individual varieties. Of the first class are the reflex symptoms which belong to all normal pregnancies. The nausea and vomiting are commonly severe, and begin usually early in pregnancy. Two symptoms specifically point to extra uterine gestation. They are the bloody discharge and the abdominal pains, which are as a rule colicky and sharp. They start from the region of the tumor and radiate downwards and outwards. These pains may begin about the first of the second month and last throughout pregnancy. The acme of their severity is about each menstrual period, and there may be an intermission of entire freedom from them between the periods. During these attacks of pain the abdomen may be swollen and tender to the touch. The pulse is accelerated, but there is no temperature rise. The bloody discharge from the uterus occurs in a majority of patients. This phenomena is usually accompanied by pain and the expulsion of the decidual membrane, the discharge being due to rupture of the decidua, of a sero-purulent, coffee-colored or reddish nature, and may be apparently so profuse as to call for the tamponade. In the primary abdominal type there may be no disturbance of the menstrual function. The return of the menses is indicative of fetal death. The rectum may be irritable, and pulsation can often be elicited by vaginal palpation. The most typical symptom is metrorrhagia coincident with the symptoms of pregnancy in its early stages. If associated with this is a discharge of decidual tissue one should expect extra uterine gestation.

False labor may be premature, happening at the seventh or eighth month, but usually makes its appearance at term, rarely afterwards. At the same time the patient has intermittent pains analogous to true labor pains. The cervix does not become obliterated, but dilates sufficiently for the entrance of one or two fingers. After the decidua is expelled the pain ceases, and does not re-

turn unless there has been a rupture of the fetal sac. The signs of labor will disappear, and milk will come in the breasts.

The symptoms of rupture are: sudden and severe pain radiating over the abdomen, rapid weak pulse, air hunger, shock and other concomitants of hemorrhage. There is apt to be nausea, hiccough, extreme tenderness of the abdominal walls. The scape of the fetus from the tube without much loss of blood is marked by severe pain, referable usually to the side, tenderness of the abdomen, and often a temperature rise. The rupture may be spontaneous, or provoked by some slight trauma.

*Physical Diagnosis.*—The os and cervix are often soft, and are either firmly confined by adhesions or pushed entirely out of their natural position by the rapidly enlarging cyst. Fetal pulsation may be felt through the vaginal wall, and the fetus can at times be outlined in the same way. There are two tumors, one of which is usually situated to the right or left of the median line. A sulcus between the adventitious body and the cervix can be made out. In some cases the fetus is palpable through the abdominal wall. On manual examination of a cyst containing a dead fetus of considerable size crepitation of the bones may be obtained. The uterus remains stationary in size after the fourth month. Fetal heart sounds and movements are discernible after the fifth month.

*Diagnosis.*—The diagnosis is nearly always difficult, and cannot be made with certainty during the first period. At that time diagnosis of probability constitutes an ample reason for surgical interference. It may be taken for ovarian cysts, fibroid tumors, several forms of salpingitis, and hematocele. It may possibly be differentiated from these by the history, the malposition of the uterus, and the disturbance of pregnancy. In the second period of pregnancy diagnosis is not so difficult, but it is nearly always impossible to distinguish one variety from another. In making a diagnosis we have what we can elicit from the story of the patient in her own words, her replies to

minute questionings, and a physical examination. After the escape of the fetus from the tube and the beginning of the secondary abdominal type the acute symptoms may subside, but there are apt to be recurrent attacks of pain. An apparently normal condition necessarily tends to throw the physicians and patient off their guard. The diagnosis is naturally difficult because of the irregularity of the symptoms, the frequency with which it is simulated by other conditions, and the ease with which the bleeding with or without expulsion of the decidua may be taken for an ordinary abortion. Probably there are few conditions more plain to the careful observer than a typical case of exfetation, but comparatively few cases are typical. The diagnosis of abdominal pregnancy is rather rarely made prior to false labor for the reason that the physician's attention is seldom called to the case. We should regard sudden collapse, associated with pallor and other symptoms of intra-abdominal hemorrhage in any woman having a possibility of pregnancy, as *prima facie* evidence of a ruptured ectopic gestation sac. A period of amenorrhea usually precedes the bloody discharge, which does not correspond in nature nor necessarily in point of time with the natural monthly bleeding. Important points relative to the bleeding are the color, the persistence and the presence of membrane or pieces of membrane. Among the most characteristic symptoms are the variable period of amenorrhea, irregular uterine hemorrhage, pelvic pain and discomfort, and the shedding of the uterine decidua. This pregnancy is like a mine ready to explode without a moment's notice, and it is highly important that the patient be within easy reach of competent surgical skill at all times. It is nearly always best to approach these pregnancies by median laparotomy. Complete removal of fetus, membranes and placenta is highly desirable. By reason of dense adhesions, great danger of hemorrhage or dangerous condition of the patient, this procedure will at times be impossible. Under such circumstances the edges of the opening in the sac should be sutured to the parietal peritoneum and the sac carefully drained. The



placenta in such cases will come away gradually by fragments, and in two or three weeks its exfoliation will have been complete. Surgical intervention should take place as early as possible after the death of the fetus. If the cyst in such cases is in the cul-de-sac vaginal section is appropriate. After the extraction of fetus and placenta the cavity had best be packed with a five per cent. iodoform gauze. I wish to urgently emphasize the absolute necessity for removal as early as a diagnosis can be made, and the stringent indication for immediate operation when we see a pregnant woman showing symptoms of intra-abdominal hemorrhage.

The author reports a case in which the diagnosis was made prior to rupture, but operation was not resorted to until a short time after rupture had taken place. Although the placental implantation was very extensive a complete operation was performed. Although the patient was in a very bad condition from hemorrhage and shock, under prompt stimulation she reacted and made an excellent recovery, the wound uniting by primary intention without drainage.

The writer summarizes his paper as follows: The greater frequency of ectopic pregnancy than the number of observed cases would lead us to believe; the usually irrelevant and typical nature of the symptoms; the difficulties in the way of making a diagnosis, and the necessity for a careful study of the cases in which the condition might be suspected, both in its present and past aspects; the importance of studying the character of the uterine discharges; the association of this with pelvic pain and discomfort, and the signs of pregnancy; the advantages of prompt operation, removal of blood and other debris by dry sponging without irrigation, thorough hemostasis, and the closure of the wound without drainage.

## THE SERUM TREATMENT OF EXOPHTHALMIC GOITRE,

BY HARRIET C. B. ALEXANDER, M. D.,

*Attending Physician, Mary Thompson Hospital,*

CHICAGO, ILL.

WHILE the nature of the affection is not yet wholly clear, great strides have been made toward an understanding of it. The theory that a disturbance of the thyroid gland is responsible for the symptoms of the disease is now the dominant one, and there are some points difficult to reconcile with any of the theories yet propounded. As regards the etiology, it is known that the disease occurs nearly five times as frequently in the female as in the male; that it is commonest in early life, and especially in the third decade; that it has a tendency to appear in the so-called neuropathic families; that many cases of the disease may occur in one family; that it often develops after emotional shock or prolonged emotional disturbance; that occasionally it appears as a sequel of some infectious process; and, finally, that climatic and terrestrial conditions play no important role in its causation, though it would appear that it is rather more common in districts where ordinary goitre is prevalent.

As the cardinal symptoms of the disease are usually described, we have the tetrad-tachycardia goitre, exophthalmos and tremor. In well marked cases all these symptoms may be present, but in undoubted instances of the disease one, two, or even three of them may be absent. Aside from the thyroid gland, it is the circulatory system, the nervous system, the eyes and the skin, the functions of which are especially disordered, though there are also evidences of disturbed activity in still other parts of the body.

Perhaps the most important nervous symptom is tremor. It has been very carefully studied by Marie, and is now regarded as a very constant phenomenon, though it undergoes marked variation in degree and continuousness. The eye symptoms of the disease are among the most

characteristic. On the part of the skin, increased sweating is the most important symptom. Diarrhea is not infrequently a troublesome symptom.

Four principal theories of the disease have been advanced: (1) That it is due to disease of the sympathetic nervous system; (2) that the seat of the malady is the medulla oblongata; (3) that it is primarily a disease of the thyroid gland, and (4) that it is a neurosis.

Modern therapeutic measures have been largely based on the "thyroid" theory. The results of partial strumectomy indicate that the successful removal of a portion of the thyroid gland can lead to cure or to definite amelioration of the condition. On the theory that the thyroid secretion normally neutralizes certain general metabollic poisons in the body, Moebius and others conceived of treating cases of exophthalmic goitre, in which there is presumably an excess of thyroid secretion in the body, by introducing subcutaneously, or by the mouth, the serum of thyroidectomized animals. It was hoped that the non-neutralized general metabollic poisons of such animals would nullify the toxic effect of the excessive thyroid secretion. As to the treatment, experience has shown the great importance of general measures; complete rest for a time, fresh air, careful diet, mild balneotherapy, etc.

The name Thyroidectin has been given to a preparation obtained under aseptic precautions from the blood of animals from which the thyroid glands have been removed, and which is exhibited as a reddish-brown powder contained in capsules, usually five grains each. Carefully conducted clinical trials seem to show that Thyroidectin can be depended upon to control the characteristic symptoms of exophthalmic goitre. In most cases the patient experiences much relief from the restlessness, tremors, insomnia and other nervous symptoms so frequently present, and a gradual lessening of the frequency of the pulse rate, decrease in the size of the glands and a diminution of the exophthalmos, with an increase of weight and a much better condition generally. The dose of thyroidectin seems to be one or more capsules after each

meal, according to the judgment of the physician and the reaction of the patient.

The following cases illustrate the results of this treatment:

CASE I.—Miss K. R., aged 25 years, by occupation a packer in a warehouse. Father died of tuberculosis at 45. Mother living and healthy. Menstruation established at 14, regular, scanty, painful first day. Has had scarlet fever and measles. Pulse 122. Fine regular tremor. Thyroid enlarged, mostly on the right side.

The tremor improved and the goitre diminished somewhat after a few weeks' treatment, when she failed to return. She is now under treatment again, the symptoms having recurred after she stopped the treatment.

CASE II.—Miss A. H., aged 38 years, typesetter. Father living. Mother died at 62 of rheumatism. Menstruation established at 15, regular now, but at first very irregular and painful. Is nervous, with slight convulsive movements. Thyroid enlarged on the right side. Fine regular tremor. Pulse 98.

Patient was placed on Thyroidectin August 1st. On September 6th there was some improvement. At this time galvanization of the sympathetic was also employed. Patient continued on Thyroidectin until October 20th. Galvanization was also employed twice a week. Less nervous, and convulsive movements occur less frequently. Gland diminished.

CASE III.—Miss E. B., aged 24. Housemaid. Vomits after eating. Lost six pounds in two weeks. Pulse 108. Fine regular tremor. Dizzy and ringing in ears.

Thyroidectin treatment begun on August 25th. September 1st, vomiting less. Improvement marked. Size of tumor reduced greatly. Nervous symptoms diminished. Appetite improved and vomiting ceased after two weeks of treatment.

CASE IV.—Mrs. W., aged 36 years, housewife. Father died at 86 of heart failure. Mother living, aged 89. German parentage. Father's family six children, five living. One died, operation, 1903, vaginal hysterectomy.

Patient has pain in left side. Dyspnea, tremor, thyroid enlarged slightly on right side, patellar reflex diminished on left side, exaggerated on right. Excitable, cries frequently.

Thyrodoctin treatment began July 25th, continued until September 8th. Some improvement in nervous symptoms, but gland not diminished apparently. Patient failed to return.

CASE V.—Mrs. J. M., aged 47 years, housewife. Menopause. Thyroid enlarged equally on both sides. Patient has nocturnal convulsive attacks and short periods of unconsciousness in the day time. Epileptic. Excitable, cries easily. Has explosive attacks. Statements unreliable, vary considerably. Memory deficient. Patient has anxious appearance. Appetite capricious. Sleep broken Constipation. Pulse 100 to 122.

*Treatment.*—Nitrate of amyl. Thyrodoctin. The patient said she had more frequent attacks after beginning the Thyrodoctin. Pulse and tremor improved, but owing to patient's feeling about the remedy it was discontinued.

CASE VI.—Miss S. F., aged 38 years, stenographer. Sister of preceding patient. Thyroid enlarged at fourteenth year. Depressed, unable to work. Thyroid very large. Tremor. Pulse 105.

Thyrodoctin and galvanization continued for three months. Improvement in subjective and objective symptoms. Only slight reduction of gland. Patient irregular about taking remedy. Pulse reduced to 86. Depression less.

CASE VII.—Miss L. L. V., aged 16 years, operates an auditing machine. Parents living. Six brothers and two sisters, all living. Menstruation established at 13, regular, profuse. Diphtheria at two years. Urine negative. Easily frightened. Depressed only at times. Tremor. Pulse 92. Right lobe of thyroid enlarged. Poor appetite.

Thyrodoctin treatment began October 6th and continued until December 1st. Pulse normal. Patient in better spirits. Gland reduced. Has continued work during treatment except for taking an extra half day off to come to



the clinic. Increase in weight. Subjective symptoms improved. Appetite good.

CASE VIII.—Miss E. L., aged 15 years, mother living. Father died of typhoid at 39. Two children, the other one dead. Menstruation established at 13, regular, painful, scanty. Has had four attacks of chorea. Scarlet fever a year ago. Complains of general nervousness. Tremor. Pulse 102. Thyroid enlarged, both lobes equally. Has noticed enlargement for a year.

Thyroductin treatment began on September 20th and continued for three months. Reduction of gland to nearly normal. Lessened nervous symptoms. Pulse 85. Patient was seen in February, and says she is nervous again and pulse is more rapid. She is again taking the remedy.

CASE IX.—Mrs. S. S., aged 38 years, married, waitress. Father died of typhoid, mother of pneumonia. Five children, four living. A sister died of tuberculosis. Patient has had five children, four living, and two miscarriages. She is extremely irritable, cries often for nothing at all. Sleeps badly. Can only work occasionally. Pulse 95. Tremor fine. Thyroid enlarged, more on right side.

Thyroductin treatment and a certain amount of rest. After being on the remedy for two and a half months patient is again able to work all the time. Enlargement reduced. Pulse 80. No more irritable than was normal. Appetite improved and weight increased six pounds.

CASE X.—Miss M. B., aged eighteen years, telephone operator. Father died of pneumonia. Mother is living. Menstruation established at 14, irregular, profuse and painless. Has had no serious illness. No history of cancer, tuberculosis or insanity in the family. Urine negative, except indican abundant. Nervous. Sleep broken. Dreams horrible things. Dizzy. Often faints. Thyroid enlarged about equally on the two sides. Tremor. Frequent and painful urination. Appetite very poor.

Began treatment on October 4th. Thyroductin and Cascara. The treatment was continued until December 1st. She expressed herself as being much better. Sub-

jective symptoms improved. Apparently no diminution in size of tumor. Appetite improved. Sleeps better.

CASE XI.—Mrs. A. S., aged 40 years, married, housewife. Father died at 66, cause unknown. Mother died at 66, of cancer of bowel. Had three children, all living. Patient established menstruation at 15, scanty, painful, regular. Three children, all living. She gets frightened easily. Faints. Dizzy. Nervous. Excitable. Face symmetrical. Fine tremor. Pulse 144. Temperature  $100\frac{1}{3}^{\circ}$  F. Thyroid enlarged on both sides. Urine negative.

Thyroidectin. Arsenauo gtt. iij., dose to be increased until gtt. viij. are taken. Treatment began August 22d and continued until December 30th. Symptoms improved. Size of gland reduced. Has not fainted since October. Pulse 108. Temperature normal.

CASE XII.—Miss M. K., aged 16 years, employed in warehouse. Father and mother living. Father a hard drinker. Had three children, all living and well except patient. Menstruation established at 13, irregular and painful, amount normal. Has had scarlet fever, pneumonia and tonsillitis. Emotional, cries often, and is easily angered. Thyroid enlarged. Pulse 62. Temperature  $97.4^{\circ}$  F. Tremor fine, regular. Urine contains indican

Thyroidectin. Galvanization twice a week. Size of gland reduced and improvement in subjective symptoms. Menstruation less painful.

CASE XIII.—Miss J. L., aged 16, clerk. Father and mother both living and well. Had ten children, eight living. Menstruation established at 14, regular, normal in amount and painless. Had no children's diseases. Urine negative. Nervous at menstrual period only. Thyroid enlarged. Tremor slight. Pulse 90. Temperature  $99^{\circ}$  F.

Thyroidectin. Patient says she can work longer without getting tired. Gland greatly reduced. Pulse 85. Temperature normal. Still nervous at periods.

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## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, MARCH 19, 1907.

DR. MARSHALL: I have a little report that I would like to make. Some three or four weeks ago I was attending a woman who had the symptoms that we in a loose way designate grippe or influenza, and in the course of that she had an attack of severe pain in the left side of the head over the temporal region, but especially down over the tip of the mastoid, and when I touched the tip of the mastoid I recalled the fact that Dr. Coomes had said that if we touched the tip of the mastoid and the patient cried out with pain, it was an evidence that the patient should be operated on. This patient cried out with pain, and there was great tenderness around that region, but there was no evidence of any ear trouble.

In the course of twenty-four hours there developed a series of little tumors beginning in the post cervical glands and spreading over the left side of the face at intervals of an inch and a half, and spread across to the right temple. They were as large as the end of my little finger. They were quite tender. Under the influence of aspirin they rapidly passed away. The tenderness disappeared rapidly under the influence of the aspirin, and the woman made a good recovery without any bad symptoms following.

About ten days ago I saw a young man of about 27 years,

and he had a tender mastoid and the same symptoms that we term influenza, and he had one or two lumps on the side of his face, but these did not spread any further. The lumps were under the skin like little tumors we see under the skin. The tumors were about the size of the end of the little finger. In a little while they disappeared.

DR. WEIDNER : I shall only say a few words about the case. I suppose that Dr. Marshall's diagnosis is the correct one. It may be something in the nature of a nodular erythema. Of course many of us thought of mumps when the case was reported, but the future course of the trouble disproves that.

There is nothing particular about Dr. Satterwhite's case. I suppose it was a case of urticaria. We may have it occur repeatedly, and may have a chronic urticaria. It readily disappears. The itching and the swelling are suspicious of urticaria.

DR. BARBOUR : I did not hear the full report of Dr. Marshall's case, but there was one idea that occurred to me, and that is that the explanation of these nodules was that they were fibrous nodules, but their prompt disappearance would exclude that. I have seen them on the back of the head, but have never seen them on the forehead. The duration of these nodules would be sufficient to exclude that.

DR. DABNEY : I do not think that there is much prominence to be attached to the tip of the mastoid. The tenderness is over the mastoid. If you want characteristic mastoid tenderness, it is just above the auditory canal and just forward. That is the characteristic place. This patient had no mastoid disease.

DR. MARSHALL : I want to mention in closing that I read a very interesting article by Benjamin Rush, of Philadelphia. His article was written in 1789 or '90, and he described it as perfectly as anything in the literature of to-day, and he speaks of the peculiar skin manifestations at that time.

DR. WEIDNER : Since the itching question has been brought up I have a case that I would like to report for the sake of finding out something, because I do not know how to cure the patient. The patient was referred to me by Dr. George Purdy. The patient is a pregnant woman 33 years of age, and she is troubled with excessive itching without any visible skin lesion. This itching is universal, and came on about the seventh and a half month of her pregnancy. The interesting feature, to begin with, is that in a previous pregnancy—the only one she has

had—the same trouble started at the same period, and lasted to the end of pregnancy and then terminated completely.

The case is interesting etiologically. Her grandmother is supposed to have had this same trouble.

She was treated the first time by all sorts of remedies without results. This time her physician gave up and sent her to me. I have seen her for one week, and have had practically no success in the case. The blood shows no changes that would give us any clew. The urine being investigated as one of the causes shows a heavy specific weight, with a full percentage of urea; the phosphates are increased, and there is a trace of indican. Sugar is not found. The stools are very fetid. I have given remedies to flush out the kidneys, and have caused an improvement in the urine. I have kept the bowels opened and flushed by purgatives and high enemata.

Sleep is almost entirely destroyed by this itching. It is worse at night and better in the day time. The woman has only slept on an average of two hours a night. Under the bromides and sulphonal she has gotten two hours of sleep at night. She has had no rheumatic pains of any kind, but I put her on asparin because I thought it was a good intestinal antiseptic. There are no symptoms on the skin except those caused by scratching. The woman is desperate, and she is looking for relief, and has brought up the question of the advisability of interrupting the pregnancy. Locally, I have used menthol and alcohol and camphor. Hydrocyanic acid ointment has made it worse. I have not tried pilocarpine because she feels just as bad perspiring as not perspiring. I have never had a case like it, and if any present have ever read of or seen a case like it I would like to ask them how to treat it. There is the slightest quantity of indican in the urine. I have given her Kutnow powder regularly. I allow a general diet.

DR. W. H. WATHEN: It is impossible to say what is the cause of this itching. It may be purely a neurotic condition resulting from changes in the nervous system due to pregnancy. We know there are many instances in the non-pregnant state where there are all sorts of nervous manifestations that we cannot account for other than by reflex. It is true in pregnancy. Here is an explanation that suggested itself to me. This woman has a toxic product generated probably in the syncytial tissues of the fetal structures that is being distributed to the system, and is irritating the periphery of the nerves. It is now known that



these poisonous productions, formed in the fetal structures during pregnancy and given off as end products into the system, are responsible for many nervous manifestations. These end products get into the system and manifest themselves in eclampsia, or in various ways. It is no longer believed that disturbance in the kidneys, such as nephritis, causes eclampsia, and if disease of the kidney existed and did not exhibit itself before pregnancy, the eclampsia is probably the result of the irritating effect manifested in the kidneys that fails to eliminate these poisonous products. Therefore, as this patient was relieved in three or four days after the first delivery it is proof positive that itching was the result of the presence in the tissues of the poisonous products which cease to be manufactured when the woman is delivered, and only require a certain time for the skin, kidneys and other excretory organs to throw them out of the system.

If the trouble is sufficiently intense to jeopardize the life of the patient in any way, I would recommend the induction of premature labor so soon as you are certain that the child will live when born.

DR. MARSHALL: I do not feel equal to discuss the subject from a very deeply scientific point of view, but from an ordinary point of view I think the irritation of the skin is due to the faulty elimination of something that is stored up during pregnancy, just as we see eclampsia from something that is stored up, and I agree with the remarks of Dr. Wathen that if the life of the woman is greatly jeopardized premature labor should be brought on after the child is of a viable age.

DR. SATTERWHITE: I would like to ask Dr. Weidner what is the condition of the patient's appetite?

DR. WEIDNER: Fair.

DR. SATTERWHITE: The reason I asked you in regard to indican in the urine was that this case struck me at once as being a case of neurotic trouble indicated by the increased phosphates in the urine. Faulty metabolism might cause this neurotic trouble, and the only thing that I can see that is likely to produce any beneficial result is to saturate this woman with guaiacol.

DR. SAMUEL: This discussion has taken quite a wide course, and the theories expressed by Dr. Wathen have touched upon points established, of course, along the line of eclampsia. You are all aware that numerous investigations have proved that fatty degeneration of the placenta produces toxins.

The question of neuroses is one that sticks close to me. I do not see how it can be explained. There is not any doubt in any one's mind as to what causes the toxemia, and it seems necessarily that it is in the fetal structures, because this woman was delivered of a healthy child in the first place, and Dr. Weidner says her nutrition is very good.

DR. WEIDNER: She weighs 122 pounds and her nutrition is very good.

DR. SAMUEL: In my opinion it is not a neurosis, because urticaria is not a neurosis. We know from the investigations of two Englishmen that if the fibrin of the blood is reduced we have a headache, stomach reflexes and urticaria. It is the result of a poison—a chemical condition; it is hardly ever an infectious condition unless secondary.

As to that condition described as erythema, it is impossible to determine from what Dr. Marshall says.

With regard to Dr. Weidner's case, I did not follow his report closely. I have seen two or three women with pruritis in pregnancy, but it followed sugar in the urine. In other cases it was due to the liver. The case is quite a mystery to me unless it is some form of toxemia that is producing irritation of the skin.

DR. WEIDNER: I would only say that my process of reasoning has been along the lines expressed by the gentlemen, and I know that some toxic substance is to blame; it acts upon the nervous mechanism and causes the itching. What it is I do not know. I looked for it in the urine in the form of sugar. We very often have it when we find pruritis. I have thought of it in the line of Dr. Wathen's syncytial toxins, of which we know little except that we know in pregnant women we have intoxications that are attributed to the syncytial cells. As Dr. Samuel stated, it may be of interest to the obscure question of eclampsia; also in albuminuria and the secondary effects upon the kidney. I must confess that I do not know of any way of determining that here. Circumstantial evidence only justifies us in thinking that the poisons are formed here. That the condition is caused by the pregnant state there is no doubt. Why it should develop late I do not know. Now, if due to the syncytial layer of cells, it would come on early.

DR. W. H. WATHEN: It generally comes later.

DR. WEIDNER: I know, but it generally comes early. It is peculiar that it should come on twice just at this time. I have tried to eliminate by the bowel and not by the skin. I have given aspirin, thymol, etc., as intestinal antiseptics.

If anybody hears of anything that would likely do good in this condition I would like to know, because I am disturbed over the patient's condition.

DR. ALLEN: Don't you think that some of us can eliminate physiologically more poisons than others?

DR. WEIDNER: No doubt.

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**Editorial.**

*Empiricism Relegated  
To The Past.*

Empiricism is surely and rapidly being relegated to the past. In this day and time men are want to deal with the facts. They are no longer satisfied to grope about in darkness and guess at things. The medical man of to-day wants to know what he is doing. The time has long since past when the barber was the surgeon and the priest the physician. Medicine is now almost an exact science. When we see the effect we at once want to know the cause of the condition before we are willing to assume responsibility. When the microscope and chemical laboratory at our disposal so many etiological factors are brought to light that we no longer have an excuse for prescribing ten or fifteen ingredients in a single prescription.

Either we are familiar with the offending micro-organism and know its most efficient bacteriolytic agent, or the post mortem room and laboratory has familiarized us with tissue and protoplasmic changes that have been etiological factors in producing this or that symptom. To the pathologist symptoms are merely signs of what is taking place on the inside, and as he reads this or that

sign he forms a clear and distinct picture in his mind of just the type of protoplasmic changes that are responsible for the symptoms. We are no longer in doubt, we know what to expect, more than that we can anticipate, and frequently take prophylactic steps, and more yet we can prognose the case.

How much more satisfactory it is to know what we are doing and what we are doing it for.

When we are familiar with the causative factors in a case and are able from symptoms to recognize just the exact changes that are going on in the tissues, and even the chemical make up of the cell, it is only left us to know the physiological action of our drugs and the changes that they can bring about in a cell, then we can frequently so alter metabolic processes and restore the normal relation of the chemical make up, removing entirely the cause of our symptoms.

There is no longer reason for treating a copremic condition for malaria or typhoid fever, tuberculosis as ambulating typhoid, diphtheria as tonsillitis, etc., and too we know what to anticipate in hepatic and nephritic sclerosis and in acute inflammatory conditions.

There is no doubt but what we can soon eliminate the stage of expectant treatment in syphilis since the spirochita pallida has been demonstrated; we can scrape an ulcer and with the microscope tell at once whether or not we are dealing with a specific lesion, and again as a therapeutic measure we are about to by artificial means increase the chemotaxis existing between the vegetable and animal kingdom with an increased fighting capacity of the white blood cell.

There is no doubt but that the surgeon goes into the operating room with a greater confidence when he has seen the chemical and microscopical analysis of the patients urine; when he is familiar with the hemaglobin reading and the differential blood count, and when arterial tension has been tested.

When the surgeon is familiar with every condition of his patient he is much more confidential at the operating

table; he knows just how much shock his patient is able to stand, just how much blood he can lose and how long he can afford to keep him on the operating table.

If we are going to practice medicine as science there is no excuse for being and empiric for every means is within our reach to assist us in practising rational medicine. Life is too dear to guess at or even to allow ourselves to become careless for a minute; medicine is not a profession for the lazy man. A practitioner who is too busy to keep up with the advance in medicine would do far more good to give up some of his practise to the younger man who is not busy and possibly a little more conscientious, or at least associate with him a younger man to do his research work and pay him well to do it.

The physician who treats a fever for two weeks as malaria and then tell the patient, after he has almost killed him with quinine, that he did his best to keep him from going into typhoid fever should have his diploma taken away from him.

I think the best remedy for the rut habit that so many fall into is for all of us to attend medical societies as often as possible, eradicate jealousy and tell our fellow practitioner what you know.

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#### NOTES AND PERSONALS.

##### AMERICAN MEDICAL EDITORS' ASSOCIATION.

The Thirty-ninth Annual Meeting of this Society was the most successful in point of attendance and general interest ever held. The rapid increase in membership is an assurance that in the future the meetings of the American Medical Editors' Association will be an important feature annually.

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The INTERSTATE MEDICAL JOURNAL (St. Louis) announces the purchase of the ST. LOUIS COURIER OF MEDICINE, one of the oldest medical journals in West, and its consolidation with the INTERSTATE on July 1st.

The ST. LOUIS COURIER OF MEDICINE was established in 1879 by an association of prominent St. Louis physicians. It



has always commanded a large following throughout the West and South, and held the respect and esteem of the entire profession of this country.

This merger removes from the field an old and highly esteemed contemporary, and its consolidation with the INTERSTATE adds strength and prestige to that periodical. This is the fourth medical journal that has been purchased and absorbed by the INTERSTATE during the past few years.

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## Recent Progress in Medical Science.

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IN CHARGE OF  
E. S. ALLEN, M. D.,  
LOUISVILLE, KY.

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### **PATHOLOGY.**

**Chloroform as an Antidote to Carbolic Acid.**—In May, 1907, at 11 P. M. I was called to see Mr. A. I found him in an unconscious condition; pupils dilated; pulse imperceptible, and profound shock; conjunctival reflex gone. There was no odor on his breath, no focal symptoms, fingers and face cyanotic, respiration shallow, very slow and spasmodic. I was at a loss. I don't know why, but I began to look around for some clue as to the cause, and found first an empty bottle, two-ounce size, with an odor of carbolic acid, and then a bottle of same size with an odor of chloroform. Having made this discovery we had a working basis (for another physician was associated in the case). He was given a hypodermic of morphine to control shock, atropine to dry up excessive pulmonary secretions—for he was drowning in his own secretions. Whisky was injected into the stomach by means of a catheter, and hypodermics of whisky were given frequently. The one-fourth grain of morphine was repeated every four hours for twenty-four hours, for when consciousness was regained the patient was quite restless. Nutritious enemata were given—not even water was allowed—per orem. The patient is practically well, is despondent and melancholia. He stated that he drank two ounces of carbolic acid and in a few minutes drank the chloroform. I do not believe a man could drink two ounces of carbolic acid and get well, so it must be that the chloroform antidoted the remaining

carbolic, and the eroded condition of the stomach prevented the absorption of the unchanged chloroform.

**The Prevention of Venereal Disease.**—(*N. Y. Medical Journal*, July 13, 1907). There is no doubt, as observed by Baker, that young men should be taught that a continent life is not detrimental to health, and to avoid unclean women as they would pestilence or plague. Warn them against the danger of illicit intercourse after they have become engaged to marry. How many of us have had to treat cases of venereal diseases after the date of their marriage was set, and there was insufficient time, under any circumstances, for them to recover. It should be explained to them that the parents of marriageable daughters will be taught that when a previously healthy girl develops a cystitis or pelvic inflammation immediately or shortly after marriage, that there is usually met some reason for it, and that reason is the presence of venereal disease in the young husband. Advocate early marriages. If there is one thing more than another that medical men should set their faces against it is the demand of society that a young man should be able to furnish every luxury and comfort in a home before he marries. It simply means that he will come to the marriage covenant unfitted either in years or health, or both, to give to society that which could be justly expected of him. Arouse and instill in the minds of young women the exalted position of a mother over that of the social childless butterfly.

**Blood Examination for Early Detection of Lead Poisoning.**—Frey, (*New York Medical Journal*, July 13, 1907), finding that the presence of lead in the urine is not constant, suggests an examination of the blood in order to detect the red cells with basophile granules, described by Grawitz in 1899. These, it is true, are not posthegemonic of lead poisoning, since they are seen also in cancer, in pernicious anemia and in certain septicemias. But in a mechanic free from these diseases and handling the lead, the presence of these basophile granules becomes of great importance. The observations of Frey show that by examination of the blood we may find the first evidence of saturnine intoxication.

**Technique**—After drying and fixing with absolute alcohol, color the blood preparation with Loeffler's blue stain, to show the blue colored granules in a certain number of red corpuscles.

### THE CHILDREN'S LAXATIVE.

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CASCARENNA, A SWEET AND PLEASANTLY FLAVORED PREPARATION—EXACTLY WHAT THE PRACTITIONER NEEDS.

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In his perplexity of choosing just the laxative or purgative he wants for a child, particularly for an infant, the physician will find that Cascarennia affords a most satisfactory solution of the question.

Cascarennia has several commendable properties that other laxative compounds do not possess. It is agreeable to children, being sweet and pleasantly flavored. There is no difficulty in getting them to take it, a point that mothers and nurses appreciate thoroughly. It is a happy combination of well tried laxatives and gentle purgatives; hence it is not an experiment to prescribe Cascarennia for the first time. It does not gripe or derange the digestive system; and owing to the presence of cascara sagrada it has a tonic laxative action that imparts to it double value in the treatment of the constipation of infancy and childhood. Finally, Cascarennia is a thoroughly efficient and reliable therapeutic agent, from which the practitioner may confidently expect only the most satisfactory results.

Each fluidounce of Cascarennia represents:

Cascara Sagrada, 40 grains.

Senna, 120 grains.

Potassium and Sodium Tartrate, 24 grains.

Chenopodium, 8 grains.

Pumpkin Seed, 8 grains.

Sodium Bicarbonate, 4 grains.

Agreeably flavored with aromatics.

The dose for a very young infant is 5 to 10 drops; a child one year old may take 10 to 20 drops; older children 20 drops to one teaspoonful, according to circumstances.

Cascarennia is prepared by the well known house of Parke, Davis & Co., which is a guarantee of its reliability.

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### THE PATHOLOGY AND TREATMENT OF HAY FEVER.

One of the most striking pathological features of this malady is a turgescence of the turbinal tissues due to extensive dilatation of the capillaries. That this is the result of an angioneurosis, involving a more or less pronounced local vaso-motor paralysis, is pretty generally conceded.

In the treatment of hay fever with Adrenalin Chloride it has

been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of strong solutions. The application of the solution of Adrenalin Chloride stimulates the vaso-motor supply, resulting in a contraction of the capillaries. Overstimulation, by reaction, is very sure to result in a complete paralysis of the vaso-motor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction.

Solution Adrenalin Chloride (1:1000) may be diluted with normal salt solution and sprayed into the nares and pharynx.

Adrenalin Inhalant may be preferred to the aqueous solution for obvious reasons. This product contains one part of Adrenalin Chloride in one thousand parts of an aromatized neutral oil base with 3 per cent Chloretone. It is vaporized by means of a nebulizer.

Adrenalin Ointment may be applied to the turgescent nasal mucosa by means of a cotton applicator. Henry Guy Carleton (*Therapeutic Gazette*, June, 1907) says that "Relief can be accomplished more quickly by smearing one or two minims of ointment containing 1:1000 of Adrenalin between the brows and half-way down the side of the nose than by the inunction and spraying of the nasal mucosa." The modus operandi is explained as follows:

"The effect is to allay the irritation of the supraorbital, supratrochlear, and infratrochlear and frontal nerves, and the superior and inferior nasal, the nasal rami of the superior maxillary and the nasopalatine nerves, all of which are involved in a severe attack. Those rami in the posterior nares which may be affected will be relieved simultaneously, exactly as all branches of the supraorbital affected in a supraorbital neuralgia are relieved when an application of Adrenalin Ointment is applied only to the supraorbital foramen."

Messrs. Parke, Davis & Co., issue a brochure on the treatment of hay fever, which will be sent gratis to any medical man upon request. We suggest to our readers that they send for the brochure, as hay fever is an exceedingly interesting and timely subject.

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After the removal of alcohol, CELERINA given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

### POST-PARTUM HEMORRHAGE AND ITS MANAGEMENT.\*

BY WALKER B. GOSSETT, M. D.,

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Louisville City Hospital; Physician in Charge of the Morton  
Church Home and Infirmary; ex-President of the  
Louisville Society of Medicine.*

A POST-PARTUM hemorrhage is a hemorrhage occurring after the end of the second stage of labor, before, during, or after the expulsion of the placenta

It is a very dangerous hemorrhage and more frequent than any other of the puerperal hemorrhages. It is usually due to one of three causes; the most frequent being the retention of the partially separated placenta, or portions of the placenta; less often it is due to deep tears involving the tissues of the birth canal, and in rare instances due to atony of the muscles of the uterus.

The blood comes directly from the open mouths of the uterine blood-vessels.

In a natural labor, hemorrhage is prevented by contraction of the fibres of the uterus and retraction of the mouths of the blood-vessels. Most cases of hemorrhage occur while the placenta is in utero, between the end of the second stage of labor and delivery of the placenta.

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\* Read before the Louisville Medical and Surgical Society, April 15, 1907.



Imperfect separation of the placenta can usually be attributed to improper management of the third stage of labor, particularly the early and energetic employment of Crede's method.

A hemorrhage which persists after the expulsion of the placenta may be due to tears, retention of placental remnants, or to atony. In the first there is a steady flow of bright red blood, which begins immediately after the delivery of the child.

When the hemorrhage is due to retention, the blood escapes in gushes, which are apt to be synchronous with the uterine contractions, and frequently in large clots; whereas in cases due to primary atony there is a continuous flow of blood, which may be so abundant as to cause death within a few minutes.

In most cases the blood escapes, but in rare instances, even after the discharge of the placenta, the hemorrhage may be concealed. Whenever find the uterus large after the second stage of labor, make a thorough examination, especially if have relaxation of the uterus.

If your patient complains of feeling cold, looks pale, wants fresh air, shortness of breath, dizziness, look out for a hemorrhage and don't forget you may have a severe hemorrhage without any external flow of blood. A post-partum hemorrhage is generally profuse, and the patient may bleed to death in a very short time.

The diagnosis offers no difficulty, except in rare cases, as in a concealed hemorrhage. A concealed hemorrhage should never occur if the condition of the uterus is conscientiously watched, although, if routine precautions are neglected, the first indication of the condition is occasionally afforded by the pale and haggard appearance of the patient. The pulse rate will be found fast, the uterus markedly increased in size, and presenting a doughy consistency instead of the characteristic firm hard sensation offered by the normal uterus. Pressure upon it is followed by a copious flow of blood from the vagina.

The source of the hemorrhage is sometimes very hard to trace, but a differential diagnosis is of the utmost im-

portance. Generally speaking, if the hemorrhage commences immediately after the birth of the child, it is due either to tears of the genital tract or to partial separation of the placenta. In the latter case it usually ceases temporarily after energetic kneading of the uterus, but recurs as soon as it is allowed to relax.

If manipulation of the uterus prove of no avail, it is probable that the hemorrhage comes from a tear, although this is not a universal rule, since in a certain number of instances the loss of blood will continue until the placenta is expressed by Crede's method or is removed manually.

Again after you have a firm contraction of the uterus following the delivery of the placenta, and hemorrhage persisting, look out for a serious tear of the cervix, which should be closed with sutures. Also if a uterus does not contract and retract firmly after the expulsion of the placenta, or if it remains so only so long as kneading is kept up, the cause of the hemorrhage must be sought for either in the retention of portion of the placenta or atony.

AS TO THE MANAGEMENT—*First*, always guard against a post-partum hemorrhage. With proper management this hemorrhage should be extremely rare.

After the end of the second stage of labor wait for at least twenty minutes for contraction and retraction to take place; during this time the placenta is separated from the wall of the uterus and the blood-vessels are closed.

Do not resort to Crede's method for at least twenty minutes. Premature attempts at expression are a frequent cause of imperfect separation.

Following the birth of twins as well as hydramnios, concealed hemorrhage and placenta previa, owing to the tendency toward relaxation, the condition of the uterus should be carefully watched for a few minutes immediately following the birth of the child, and at the first sign of failing contraction the uterus should be energetically kneaded.

During the twenty minutes you may sit by the side of your patient with the hand over the fundus of the uterus,

simply to steady the uterus, and to keep in touch with its contraction or relaxation.

After the expiration of twenty minutes grasp the uterus and make steady pressure upon the fundus of the uterus in a downward and backward direction, at the same time knead it. Often the kneading is not necessary.

If hemorrhage begins or keeps up increase your pressure and kneading. If the hemorrhage does not now cease I introduce the hand into the uterine cavity and empty it of its contents. If necessary separate the placenta at its attachment; as it is separated remove it and all retained portions and also blood clots and with the other hand knead the uterus through the abdominal wall.

After separating the placenta the hand should not be withdrawn at once, but should be allowed to recede gradually as it is forced down by the contraction of the uterus. Even after the hand has been forced out of the uterus I keep it in the vagina until the ergot has brought on tonic contraction and so gained control of the uterus. Now I feel safe to leave the patient and clean up. If have hemorrhage after the hand has been removed or forced from the uterus and it is in the vagina, place the fingers back of the cervix, the other hand being on the fundus of the uterus, pressing the hands together causing a flexion of the uterus will frequently stop the flow. Be sure the hemorrhage is not from a lacerated cervix; if so, suture it. If hemorrhage now keeps up I give a very hot saline intra-uterine douche. In many cases this acts as a most efficient hæmostalic, causing the uterus to contract forcibly and permanently.

If the hemorrhage now persists there is but one thing to do, and that is to pack the uterus tightly with sterile gauze.

In by gone days there used to be many things tried; such as introduction of ice into the uterus, solutions containing vinegar, per chloride of iron and other astringent solutions. But these things are not now used. We know now that none of them act as promptly or efficiently as the uterine pack, the employment of which, although com-

paratively rarely indicated in exceptional cases, offers the only reliable means of coping with the condition. For this reason the obstetrician should always carry in his bag the materials necessary for such treatment. Do not be in such a hurry to stop the bleeding as to neglect your aseptic technique.

The natural tendency of the physician is to forget all other risks in his attempts to check the bleeding. By so doing you may save your patient from death from hemorrhage, but to die in a few days from infection. There is one exception and that is in very rare cases of atonic hemorrhage in which it appears, even a delay of a few minutes means inevitable death. In every case the child may be placed to the breast. In every case of labor after the placenta has been expelled I give ergot.

#### DISCUSSION.

DR. SPEIDEL: I thank the essayist for the excellent paper he has given us. I have a few words to say. Nature makes three provisions for controlling the hemorrhage in a healthy individual. The first is the peculiar arrangement of the muscular fibers in the gravid uterus. The uterine sinuses are surrounded by muscular fibers, that is the blood-vessels pass through meshes of muscle fibers in consequence of which when the uterus contracts the blood-vessels are clamped. The second provision is the fact that in the uterine sinuses at the site of the placenta the two outer coats of the blood-vessels are absorbed, and the only one that remains is the tunica intima, and as soon as the uterus contracts this contracts into the wall of the uterus. The third condition is the unusual coagulability of the blood in the uterine sinuses.

Speaking of the symptomatology, there is an early symptom that I have noticed in all cases of uterine bleeding, either in post-partum hemorrhage or in abortions and miscarriages, and I hardly think it is mentioned in the text books, that is yawning. As soon as you see the patient yawning in any of these conditions it is a good plan to examine the uterus.

In regard to the treatment, that depends as the essayist says upon the cause. If due to a laceration of the cervix, drawing the cervix down will check the hemorrhage temporarily. Complete suture of the tear is not absolutely necessary, and under

some circumstances is not best, but a suture placed at the angle of the tear will control the hemorrhage.

In cases of retained placenta the object is to evacuate the uterus, and in many instances this can be done simply by expression with the hand on the abdomen. If this does not accomplish the purpose the hand or the gloved hand should be inserted into the uterus. Then it is best to leave the hand in the uterus having removed the placenta until the following steps are performed. The first thing should be the hypodermic injection of one of the ergot preparations and perhaps strychnine, and then the hot intrauterine douche should be given for two purposes; first to cleanse the uterus of any infection that might have been carried into the uterus, and in the second place to produce contraction of the uterus, the temperature being 116 degrees. The hand can be withdrawn as soon as the hot douche is given, the presence of the hand keeping the uterus dilated and allowing the introduction of the douche tube to the fundus of the uterus.

In cases of uterine inertia quick action is necessary. If the uterus does not respond to kneading the quickest way to stop the hemorrhage is by pressure upon the abdominal aorta, which can be felt by pressing the hand back toward the spine when the pulsation of the vessel will indicate that you are pressing upon it. This not only checks the hemorrhage at once but often brings about contraction of the uterus.

Now, in addition to this the pillow should be removed from the head of the patient and the foot of the bed elevated in order that the patient may not suffer from syncope. Then of course preparation should be made for the introduction of saline solution. Under these circumstances it is best to introduce it into the rectum. Absorption under these circumstances take place rapidly from the rectum, and this is the easiest way to carry this out.

DR. COLEMAN: The essayist has covered the ground thoroughly and carefully, and I do not know that I can add anything special to what he has said. I do feel that equally important to the treatment of this grave condition are the means that can be employed in preventing this trouble. The causes of post-partum hemorrhage are about as mentioned by the essayist, but there are other causes, such as tumor and the rupture of the blood-vessels along the course of the parturient canal. I think he mentioned the most common cause as retention of blood clots or



the placenta. Another cause—the second I feel like—is inertia of the uterus. Whether it is due to a sudden and violent labor exhausting the muscular fibers of the uterus; whether it is due to this rapid labor or a great many labors—six, eight or ten tending to weaken the patient, if not the muscular fiber or the uterus—or whether it is a general weakened condition of the patient, I have found that in the few cases I have had the cause.

Now then to prevent this hemorrhage occurring. I am glad to say that when I started out in the practice of medicine I had grave fears of hemorrhage, and I went to every case with anxiety because when I was a student it was dwelt upon as a grave danger. I was not impressed with the fact that it seldom occurs in cases managed properly. Therefore I had a syringe ready and hot water so that I could use it if necessary. It seldom occurs if the labor is properly managed.

I believe that one of the causes is from too rapid delivery of the placenta. I have seen this occur a good many times in being thrown with other physicians whether calling them in consultation or being called in consultation. I have seen them insist that the placenta be delivered immediately after the delivery of the child. As Dr. Gossett has said in his paper the use of the Crede method immediately after the delivery of the child is wrong. We should give time for the muscles to contract and close the mouths of the vessels before kneading the uterus, and forcing these clots out of the mouths of the vessels and cause hemorrhage. I believe we ought to dwell upon how to prevent this hemorrhage. I am glad to say that I have been successful and all of you have when employing these methods to prevent hemorrhage.

I saw four cases two weeks ago, and I want to say that the treatment of the condition is best accomplished by emptying the uterus, and next to this the application of ice over the abdomen. After the uterus is emptied it should be followed down with pressure from above. I used this method in a case a couple of weeks ago. The patient was a large flabby woman. I had difficulty in checking the hemorrhage after removing the clots. The uterus would contract down but would let loose again. I ordered some vinegar and with gauze saturated in vinegar I applied it to the uterus and held it there for a minute or longer and the hemorrhage had ceased. The doctor mentioned this in a way as a treatment relegated to the past. I think if we look up the best authorities we will find that vinegar is recommended.

Hirst, of Philadelphia, mentions this as one of the best methods of controlling hemorrhage. This was called to my mind soon after I began the practice of medicine. I had a severe case of post-partum hemorrhage and used this remedy with success. It is antiseptic and astringent, and I believe it is timely to use vinegar in this way. The best means and the means that should be used without much delay is packing the uterus.

DR. DAVIDSON: I would like to endorse what Dr. Coleman has said in regard to vinegar, but I think it is better to use chemically pure acetic acid, and the doctor who does this kind of work should carry a two or three ounce bottle in his obstetrical bag.

I think students, especially those just leaving college, should be taught or impressed with the fact that they should have a routine treatment for post-partum hemorrhage. You all know how frightened the young doctor is when he has his first case of labor and how much more frightened he will be if he has a hemorrhage in this case. So it is well to impress upon them a routine treatment, and I think this treatment as good as any. First, they should be impressed with the fact that the hand should be upon the uterus from the time the child leaves the uterus, that is, the contraction of the uterus should be maintained by the hand which should be placed on the fundus of the uterus, or the hand of an assistant may be trusted to keep the uterus contracted. If this is turned over to a trained nurse who has had much experience in obstetrics she should tell him from time to time whether the uterus is firmly contracted. If symptoms and signs of hemorrhage appear and the uterus is felt above the umbilicus it should be pressed down upon the symphysis pubis. If the doctor pays attention to this little fact, this little thing of watching the uterus, he won't have post-partum hemorrhage, that is, he will have it in but few cases. Now, if he has hemorrhage he should first use Crede's method. There is one little point about this method that should be brought before doctors distinctly and that is that the uterus should not be pressed down in the vagina, but should be pressed against the pubic bone. There you have something to press against. Next the hand should be placed in the uterus and all of the clots removed. There may be a placenta succenturia. This, if present, should be removed. If the presence of the hand in the uterus does not cause firm contraction take a piece of gauze and saturate it with a solution of acetic acid and introduce this into the uterine

cavity and squeeze the acetic acid into the cavity ; it acts as an irritant to the uterine muscle and causes immediate contraction of the uterine muscles, and these muscles ligate the sinuses. If you still have hemorrhage then you might use the hot douche, but introduce the acetic acid in the douche, two or three ounces to a quart or a half gallon of hot sterile water. Then in addition to this have your assistant place ice or pour ether over the region of the pubes ; this will serve the same purpose. Then as a last resort you can tampon the uterus. One should carry acetic acid and gauze—an inch bandage will do nicely—and tampon the uterus from top to bottom. That of course is a last resort, but often the previous treatment will stop the hemorrhage. I wish to thank the doctor very much for his able paper.

DR. COLEMAN : I would like to ask if any one here has heard of a case dying from post-partum hemorrhage. It is claimed before one would die—while the authorities do mention the patients dying in three or four minutes—that collapse and syncope would prevent further hemorrhage and death. I know of one woman dying. It was a premature birth of four or five months. The physician went away and left the patient alright and went back and found her dead. I never knew the condition, but possibly there was a piece of the placenta left that caused the hemorrhage.

DR. SPEIDEL : I think the statistics state that the death rate is one in five hundred.

DR. DAVIDSON : Doctor, if you use ergot by the mouth and not hypodermatically, when do you give it? Immediately after the child is born or do you wait until the placenta is expelled?

DR. GOSSETT : I am of the same opinion as Dr. Speidel, that yawning is an important symptom of hemorrhage. I think we can guard against these hemorrhages. Dr. Davidson said that after the birth of the child the hand should be put over the fundus of the uterus and kept there. After the head begins to come out over the perineum place the hand on the fundus and leave it there until the child is born, then have a nurse to place her hand on the fundus and keep it there until good contraction. After delivering the child and tying the cord hand the child to some one, place a hand over the fundus and hold it there and do not leave the woman until the placenta is born. After the expulsion of the placenta give ergot. Give it hypodermatically. If the uterus is not firmly contracted I sit beside the patient with the hand on the fundus guarding against hemorrhage.

I remember a case in the practice of Dr. — that impressed upon me the importance of giving ergot in all cases after the delivery of the placenta. In this case the uterus was so firmly contracted that he did not think it necessary to give ergot. He waited an hour and the uterus was still firmly contracted. When he reached his office he received a telephone message and hastening back to the case, the uterus had relaxed and the patient had almost bled to death. In this case if ergot had been used he would not have had relaxation of the uterus. We cannot do harm with ergot, therefore, we should give it.

As to the use of vinegar, I do not use it. I keep the hand over the fundus of the uterus for fifteen or twenty minutes after the delivery of the child and then by Crede's method deliver the placenta. If you have hemorrhage deliver the placenta. After the delivery of the placenta push down on the fundus of the uterus and upward and forward on the cervix causing an ante-flexion of the uterus. In one or two cases that I saw this stopped the hemorrhage at once. If this does not stop the hemorrhage I use a hot intra-uterine douche and then pack the uterus.

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### A SYNOPSIS OF MEDICAL SCIENCE.\*

BY SAMUEL F. BROTHERS, PH. G., M. D.,

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BROOKLYN, NEW YORK CITY, U. S. A.

BEFORE beginning, I desire to state that no erudite or exhaustive presentation of the subject has been contemplated, nor has any attempt been made at nosological accuracy. On the contrary, a more or less elementary resume has been aimed at. Indeed, no twenty-minute paper would admit of more than a superficial reference to each sub-division. If my paper appears disconnected in places, I must plead lack of opportunity as my excuse.

The races of mankind may be divided into the New-Guineans, Hottentots, Kafirs, Negroes, Australians, Malaysians, Mongolians, Arctics, Americans, Dravidas, Nubians, Mediterraneans and Half-breeds. Mulatto's are the offsprings of the Negro and White races. Oquadroons are the

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\* Read before the Paris Branch of the American Medico-Pharmaceutical League, on July 15th, 1907, at the Hotel Moderne, Paris, France.

offsprings of White and Mulatto, and Octoroons, of the White and Quadroon races.

Physiology treats of the functions of the human body. Comparative physiology comprises animal and vegetable physiology. General physiology treats of life in the abstract, while the physiology of man is a variety of special physiology; it is also called hygienic physiology.

Histology is the study of the minute anatomy of the normal tissues of the body. Hygiene embraces a knowledge of healthy man, both in society and individually, as well as of the objects used and employed by him, with their influence on his constitution and organs. It includes regimen, the rational and methodical use of food and air, and of everything essential to life, both in a state of health and disease.

Regimen is often restricted in its meaning, to diet. Sanitary hygiene means the measures and regulations adopted to prevent the development and propagation of diseases reputed to be pestilential especially bubonic plague, yellow fever and cholera.

Diets are divided into milk diet, meat diet, fish diet, soup diet, fluid diet, dry diet, etc.

Medicine is a science, the object of which is the cure of disease and the preservation of health. It is sometimes intended to comprehend all branches of the healing art, but, as a rule, it indicates the diagnosis and treatment of so-called internal diseases, usually curable by medicinal remedies, in contradistinction to surgery. It includes such branches as physiology, pathology, therapeutics, materia medica and hygiene.

Conservative medicine is a term applied to that mode of treating disease which tends to the preservation, development and support of the vital powers.

Homeopathic medicine is based on a doctrine, which maintains that disordered actions in the human body are to be cured by inducing other disordered actions of a like kind, this to be accomplished by infinitesimally small doses, often of apparently inert agents—the ten-millionth part of a grain of charcoal—for example.



The term Eclectic Medicine is applied to that form of treatment by which the practitioner is said to "choose" exclusive views using mostly botanical drugs, and their derivatives.

Medical Jurisprudence is the application of medical knowledge to the solution of every question connected with the administration of justice. It pertains to questions concerning wounds, poisons, insanity and presumption of survivorship, requiring technical knowledge of the medical sciences for their elucidation and determination.

State medicine is the knowledge brought to bear on public hygiene, and matters appertaining to medical jurisprudence.

Hypnotism and suggestion are modes of action on the nerves through the medium of the senses.

Pathology is that branch of medicine whose object is the anatomical knowledge of disease. It has also been defined as the physiology of disease. It is divided into general and special pathology. The first considers diseases in common; the second, the particular history of each. It is subdivided into internal and external, otherwise medical and surgical.

Bacteriology is the study of such micro-organisms as are found to be present in diseased conditions of the body. Bacteria are micro-organisms or microbes. Bacteriology is the department of biology which deals with bacteria. A bacterium is a schizomycete or microscopic fissionfungus, which multiplies by fission, or sometimes by spore-formation. Bacteria are extremely minute, and without chlorophyl, consisting of single spherical, rod shaped or cork screw like cells or aggregates of such cells, and occur as saprophytes (living upon dead organic matter) or refuse eaters, and as parasites. Although most of them are harmless, others cause the various diseases known to medicine. Some forms are the spheroidal bacteria, diplococci, sarcina, streptococci, diplococcus pneumoniae, bacillus typhosus, bacilli with cilia, bacilli with spores, tubercle bacilli, diphtheria bacilli, Asiatic cholera spirilli and recurrent fever spirilli. Bacilli consist of rod like or filiform

cylindrical cells, multiplying by transverse division and by the formation of endogenous spores.

Sarcina are spheroidal bacteria in which the cocci divide in three planes perpendicular to each other, but cling together in cuboidal packets. The streptococci are curved or twisted chains of micrococci. The diplococci consist of two cells united. The spirilli are spirally twisted and rigid, filaments.

Pharmacy is the art which teaches the knowledge, choice, preservation, preparation, and combination of medicines. It was formerly divided into galenical and chymical pharmacy. The former, called after Galen, embraced the operations to which medicines were subjected without chemistry; the latter comprised the preparation of medicines founded on the chemical action of their principles.

Chemistry is a branch of the natural sciences whose object is to investigate the nature and properties of bodies, simple and compound, inorganic and organic; and to study the force or power by virtue of which every combination is effected. The various modifications are called organic chemistry, animal chemistry, physiological chemistry, pathological chemistry, anthropochemia, therapeutical or pharmaceutical or medical chemistry, hygienic chemistry, vegetable chemistry and vital chemistry.

Medical physics is that form of physics directly applicable to medicine—either to the explanation of vital phenomena, the preservation of the individual, or the treatment of disease. Under this head come radiography, vibration, massage, baths, superheated and normal air, light, electricity, etc.

Therapeutics is that part of medicine the object of which is the treatment of disease—the department which comprises the *modus operandi* of medicines.

Materia medica is that division of medical science which treats of the knowledge of medicines, their action on the animal economy, and mode of administration. They may be classified as emetics, cathartics, anthelmintics, expectorants, errhines, sialagogues, diuretics, antilithics,

diaphoretics, narcotics, tetanics, antispasmodics, emenagogues, parturifacients, excitants, tonics, astringents, sedatives, refrigerants, revellants, eutrophics, antacids, antalkalies, disinfectants, demulcents, and diluents.

Errhines excite sneezing and increased discharge.

Sialagogues provoke the secretion of saliva.

Antilithics are supposed to prevent the formation of calculi in the urinary organs.

The tetanics, in large doses, produce muscular spasms through nervous action.

Antispasmodics probably act by turning the principle of the disease from its seat.

Revellants act probably like revulsives.

Eutrophics are agents whose actions are exerted on the system of nutrition, without necessarily occasioning manifest increase of any of the secretions.

Sero-therapy signifies the treatment of disease by injecting into the veins (or cellular tissue) the serum, usually of certain animals which have been rendered immune to the disease by repeated injections of bacteria associated with and believed to cause the disease.

Toxicology is the study of poisons. The inorganic poisons include mineral acids, prussic acid and its salts, alkalies and their salts, alkaline earths and their compounds, alcohol and spirituous liquors, volatile oils, gases, iodine and its compounds, metals and their compounds, phosphorus and glass or enamel. The organic vegetable poisons include the irritant, acro-narcotic, narcotic, and toad-stools. Organic animal poisons are poisonous fish, serpents, cantharis vesicatoria, insects, and saliva of rabid animals.

Medicine, in a sense, includes pediatrics, obstetrics, insanity, diseases of the nervous system, electro-therapeutics, etc.

Pediatrics indicates the medical treatment of the diseases of children.

Obstetrics is the art of midwifery. Parturition is the act of delivery. The first stage represents the precursory signs. In the second stage those peculiar pains are ex-

perienched which extend from the lumbar region towards the uterus. During the third stage contraction of the uterus and abdominal muscles occur. In the fourth stage the head presents at the vulva, the perineum being considerably distended, until delivery is completed by the birth of the child.

The "presentations" may be as follows: The regular or vertex presentation may be occipito-anterior or occipito-posterior. The occipito-anterior presentation may be left occipito-cotyloid, right occipito-cotyloid, or occipito-pubic. The occipito-posterior presentation may be left fronto-cotyloid, right fronto-cotyloid, face or right mento-iliac. Other presentations may be of the pelvis, of the foot, of the knees, of the breech, and of the trunk.

Dystocia, or difficult labor, may be due to various states of the fœtus, various conditions of the pelvis or uterus, physiological states, or pathological states.

The various states of the fœtus may be large heads, malpresentations, plurality of children, or deformities.

Conditions of the pelvis or uterus may be a deformed pelvis or a displacement of the uterus.

Physiological states may be inordinate excitement or deficient excitement.

And pathological states may be local or general.

Preternatural labors may require manual assistance only, or may require appropriate instrumental assistance, as the short forceps or long forceps, or lever or vectis, or fillet and blunt hook, or embryotomy or symphysiotomy or Cæsarian section, or separation of the head of the fœtus from the body, or the induction of preinature labor.

Insanity includes all the varieties of unsound mind—mania, melancholia, moral insanity, dementia, and idiocy. A slight degree of insanity is sometimes popularly called "A kink in the head."

Mania is a disorder of the intellect, in which there is erroneous judgment or hallucination, which impels to acts of fury.

Melancholia is a variety of mental alienation characterized by excessive gloom, mistrust, and depression, gen-

erally with insanity on one particular subject or train of ideas.

Moral insanity is a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral disposition and mental impulses, without any remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane hallucination.

Dementia is characterized by a total loss of the faculty of thought or by such an imbecility of intellect that the ideas are extremely incoherent. Mania and melancholia are apt to end in this.

Idiocy is a form of dementia which more commonly depends upon original conformation.

Diseases of the nervous system are mostly functional, although spinal diseases are usually of a more or less inflammatory nature.

Electro-therapeutics represent the laws, principles, and doctrines of the treatment of disease by electricity.

Radiography is the art of making or using the fluoroscope or skiagraphs and the general study of the X-ray. A skiagraph or radiograph is a permanent shadow-picture produced by Roentgen or "X-rays" passing through the object and falling upon a sensitive photographic film, instead of a fluorescent screen, as in the fluoroscope.

Surgery is that part of the healing art which relates to external diseases generally, but also to all diseases treated with cutting instruments. Varieties are antiseptic and aseptic surgery, conservative surgery, operative surgery, military surgery, plastic surgery, orthopædic surgery, gynecology, genito-urinary surgery, dentistry, dermatology, naso-pharyngeal surgery, ophthalmology, otology, etc.

Antiseptic surgery is carried on with the employment of antiseptics. Aseptic surgery implies thorough sterilization of all bodily surfaces, instruments, and dressings. Conservative surgery seeks to avoid excision or amputation. In operative surgery cutting instruments especially are employed. Major surgery may involve risk to life.



Minor surgery applies to simpler operations. Military surgery is that branch connected with the army and navy. Plastic surgery contemplates procedures for the formation or restoration of lost or deformed parts. Orthopædic surgery is that branch of plastic surgery which relates to the correction or prevention of deformity, especially in the case of infants and children.

Gynecology is the science that treats of the functions and diseases peculiar to women. It includes diseases of the vulva, vagina, uterus, Fallopian tubes and ovaries, and of the female urinary bladder, rectum, perineum, and peritoneum.

Genito-urinary surgery pertains to the genital and urinary organs, especially of the male.

Dentistry is the practice or art of dental surgery, as filling, cleansing, adjusting, or extracting teeth, and providing artificial dentures. Dentistry includes dental caries, dentition odontalgia, mechanical dentistry, surgical dentistry, oral surgery, etc.

Dental caries is an ulceration and decay of the teeth, supposed to be caused by bacilli. Dentition is the process or time of "cutting" the teeth. The permanent teeth are the incisors, canine, premolars, molars, and wisdom. Odontalgia is toothache, due to caries or neuralgia. Mechanical dentistry is opposed to surgical dentistry, oral surgery, etc.

Dermatology relates to the skin and its diseases and cosmetic deformities.

Naso-pharyngeal surgery has to do with diseases of the nose and throat.

Ophthalmology treats of the eye, its structure, functions, diseased conditions, anatomy, physiology, and pathology.

Otology relates to the surgery of the internal ear.

The four great achievements of the century have been the introduction of anesthesia, the establishment of ovariectomy as a justifiable procedure (the outcome of which has been modern abdominal surgery), the elevation of gynecology into a science, and the recognition of the prin-

ciples of antiseptic surgery. When we remember that of the four the first three are clearly attributable to American genius and skill, and that nowhere in the world was the inestimable value of the fourth earlier appreciated than in this country, we can understand the debt which the civilized world owes to American surgery.

Of the comparatively more recent advances, radiography, sero-therapy, cocaine, the active principle of the suprarenal gland, and antisepsis are destined to take the lead in medical achievement.

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### ACUTE HÆMATEMESIS.\*

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THIS condition is definitely recognized as a surgical entity by Mayo Robson and B. G. A. Moynihan, in a volume published in June, 1904. For premises I quote verbatim from the above reference and apply the description here used as fitting the caption of this article, the scope of which is intended only to include the cases coming within the bounds of Robson Classification, namely, "The Sudden Seven Attacks of Hæmatemesis," or melæna, occurring usually in young anæmic women, threatening life immediately and frequently occurring without any, or with only slight preliminary symptoms. In this class may be conveniently considered the hæmatemesis said to be due to vicarious menstruation and the form known as post-operative hæmatemesis, for these three forms are all related in the fact that after death the stomach lesions seem inadequate to explain the serious nature of the bleeding.

As will become apparent after a careful perusal of the quotation just cited, the purpose of the present article does not contemplate the consideration of cases of distinct ulceration or the destruction of gastric mucous membrane

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by mechanical or chemical agents. The dominant idea is to deal only with that class in which hemorrhage and its consequences make up the problem presented for solution.

I shall illustrate further on with a case which occurred in my own practice and attempt to prove the correctness of my diagnosis by abstracting a report of two operated cases by Moynihan and Robson contained in the volume above referred to.

Judging from the literature I have access to, the condition, I conclude, is exceptionally rare.

*Etiology.*—The immediate cause is veiled in mystery. Sex exercises a powerful influence, the malady being confined almost exclusively to women. Age is a strong factor, the disease coming as it does between twenty and forty years, as a rule. Occupation is important from the etiological standpoint, as noted by Gilman Thompson, in the *American Journal of Medical Sciences*.

Among women hæmatemesis most often occurs in servant girls and seamstresses. Of twenty-eight cases in males more than one-fourth occurred among those whose occupations predispose to metal poisoning.

In the case of duodenal ulcer (Howard, A. J. M. S., Dec. 1904) gives the proportion as five males to one female. Other etiological factors may be enumerated as previous "stomach troubles," chlorosis, trauma, alcohol, syphilis, tuberculosis, disease of heart and blood vessels. (Howard) I think hyperchlorhydria might be wisely added.

Eisenrath published a report of a case by Dr. E. Hitzsche (*Annals Surgery*, Vol. xxxvi, p. 966) in which hæmatemesis occurred as a complication of a fatal case of gangrenous appendix. At autopsy the gastric mucous membrane of the fundus and greater curvature was covered with innumerable flat pin-head sized ulcers, covered in part by blood-clots. The autopsy was performed in three hours after death. The author cites the cause as a toxic one.

There have been frequent reports of cases occurring after operation on omentum and bile passages, also esophageal varices with hepatic cirrhosis. Theodore

Fischer, in the *Boston Medical and Surgical Journal*, reports a case of hæmatamesis with small white kidney. One case is recorded by a German authority as occurring from military aneurysm in the gastric mucosa.

Fest (J. A. M. A., Vol. xxxviii, p. 1597) records cases of hæmatamesis due to malarial poison. He notes that extreme anæmia is not essential.

Fowler (J. A. M. A., Vol. xli, p. 518) reports fatal cases following appendectomy. Multiple minute ulcerations were found on lesser curvature. The author concludes they were due to spaphylococci from the infected appendix. Thrombi in the gastric mucosa are exquisitely demonstrated in this specimen.

Tonarelli Ab (J. A. M. A., Vol. xli, p. 942) reports two cases of fatal hæmatamesis occurring one and five days after operations on account of biliary lithiasis in the first and hydatid cyst of the liver in the second. He ascribed retention of bile as a causative factor. In the case that came to autopsy there appeared only to have been a parenchymatous hemorrhage.

A case of post-operative hæmatamesis is reported by Winslow as occurring in his own practice (J. A. M. A., Vol. xl, p. 1324). He is disinclined to accept the explanation of sepsis as the origin. My own case occurred nine days after a difficult delivery.

T. B. of mucous membrane and hepatic cirrhosis have been demonstrated. Fowler and Buck have each reported cases following operation. Buck's case recovered.

Grandean reports in Gould's Year Book of Medicine and Surgery one case in a man forty-five clearly traceable to infection and one case in a man of forty-five traceable to infectious bubo.

Thompson (J. A. M. A., Vol. xlv) reports several personal cases which no ulcer was found, though hæmatamesis was alarming.

*Pathology.*—This feature has been more or less presented in considering the causative factors. In the two operative cases reported by Robson of diseases of the stomach, presented changes in the gastric mucosa wholly

inadequate to explain the excessive bleeding. Yet there is one condition that remains constant in all the reported cases, viz.: Multiplicity of lesion. In Case I of Robson there were seven bleeding points discovered at operation. Only two of them, however, required ligation. In Case II a considerable number of bleeding points were found, three of which required ligation.

These two cases may be accepted as the type of pathological changes to be found in instances where gastrorhagia supervenes in persons previously in apparent health. I am confident from what I have read on the subject that slight erosion of the gastric mucous membrane must exist in those cases of post-operative hæmatamesis, of which quite a number have been reported.

The abrasions in each case are multiple and may be so small as to escape detection by the unaided eye. I would apply the same reasoning to instances of vicarious menstruation.

The reason for the existence of these lesions and the exact manner of their formation is a question still under discussion. No theory as yet advanced has endured the test of clinical application. The lesions so far observed do not seem to have any definite location, but are distributed indiscriminately about the gastric wall. The size of the vessels involved is a matter of some importance as determining the line of treatment to be pursued. This point, however, has so far proven a stumbling-block to clinicians.

If the volume of blood vomited is copious the presumption is, of course, justified that a vessel of considerable size is eroded. The emesis of a small quantity does not show beyond doubt that a slow hemorrhage is progressing, because the site of bleeding may be situated near the pylorus and the blood passed on into the intestine.

We invariably have malæna associated in cases of hæmatamesis. Hemorrhage in all forms of gastric erosion shows a remarkable persistency and decided tendency to recurrence. Owing to the fact that the injured vessel is not entirely severed, but the opening is in the direction of



the long axis of the artery, a circumstance that prevents the inner coat from folding inward, and thus affording an effectual barrier to the exit of the blood. Hæmatamesis occurring in early adult life is less significant than that occurring in later years.

"The bleeding may be from small arterioles, which radiate between peptic glands from the trunks along the curvatures (the coronary most frequently) or from extrinsic arteries, alone being responsible, according to Brinton, for 55 per cent. of deaths from hæmatamesis."—*Robson and Moynihan*.

In Year Book of Medicine and Surgery for 1904, p. 83, A. H. Buch reports a case of hæmatamesis coming in four hours after a laparotomy. He attributed the hemorrhage to nervous reflex action. The case recovered without operation. The same author reports an operative case in which a single erosion was found on the post wall and cardiac end of the stomach. Closed with purse-string suture, located with difficulty. The author here makes the significant note that no induration was present around the margin of the lesion. This, to my mind, expresses the pathological distinction between an ulcer and a simple erosion.

Henry M. Joy, in Year Book of Medicine and Surgery, p. 83, reports two cases that came to operation, in one of which there were thirteen bleeding points secured. This case was operated a second time and six or eight additional points secured. There existed no indication of ulcer prior to hemorrhage.

Sepsis and other associate influences have been already considered under the head of etiology.

It might be fair to include as a pathological and etiological factor anything that would cause excessive dilation and consequent thinning of the gastric walls. Great stress is laid upon this point by Moynihan.

*Symptomatology*.—Characterized by spontaneity, abrupt onset, rapid loss of large quantity of blood, spontaneous cessation, infrequency of repetition, transience of result anæmia. Hæmatamesis is the most prominent of all the

symptoms. It is sudden, copious, and overwhelming. The quantity varies from a thin stained mucus to a quart of clots, mixed with bright red fluid blood. Almost invariably, there are clots in the vomited blood. The hemorrhage may come without premonition, or previous history of gastric disturbance.

In my own case the hæmatamesis was preceded by as much as 12 hours, by a period of restless uneasiness, insomnia, and sighing respiration, and rapid pulse.

Melæna may occur without hæmatamesis. Next, in prominence and importance, to hæmatamesis stand melæna or the evacuation of tarry matter from the bowels. This material which is merely decomposed blood, depends in quantity upon the amount of bleeding and the situation of the severed vessel.

The nearer the pylorus, the bleeding point is situated, the larger the quantity of blood that will gravitate into the intestine, and pass out in its modified condition through the rectum. It is remarkable how long the coffee ground matter will continue after all other evidences of bleeding have disappeared.

In my case, we found such material in the alvine discharges daily, for as long as two weeks after the last attack of hæmatamesis. According to Hasslin, melæna only occurs when the loss of blood amounts to 500 cc.

One feature that excites my wonder in these cases, is the absence of nausea, and the astonishing ability of the stomach to retain whatever is ingested. There seems to exist only a sufficient emetic tendency to unload the clots as they are formed inside the stomach.

"Severe hemorrhage may cause instant death without external evidence." Howard, (J. A. M. S., Vol. cxxviii, p. 947).

Post-operative hæmatamesis has proven in reported cases almost invariably fatal. According to F. G. Connell, (Annals of Surg. Vol. xl, p. 502). The amount of the hæmatamesis will be found to be no criterion as to the size of the bleeding vessel.

In cases that have terminated fatally, the bleeding point

has been so small as to escape detection at autopsy, even in the hands of the most expert.

On the other hand cases in which the bleeding vessel has been found to be of such caliber as the splenic artery, life has persisted for weeks after the beginning of the hemorrhage. There has been several reports lately of occult melæna, or discharged blood discoverable in the stools only by microscopical and chemical examination. (The references have escaped me).

I think, however, this aid to diagnosis is too refined to become valuable for practical application.

Hemorrhage from acute ulcer, although frequently violent and depleting displays a marked tendency to subsidence under medical treatment. (Blake, J. A. M. S., Vol. cxxviii, p. 988).

Deaths directly due to hemorrhage have been estimated at 8.5 per cent in chronic ulcer. Howard, (J. A. M. S., Vol. cxxviii, p. 954), more fatal male than female. Hood, of London, in a period of twenty years found no case of fatal gastric hemorrhage in a young woman.

Howard cites that it is impossible to estimate the size of vessel injured by amount of blood lost, or length of survival of patient. He quotes Robson, as stating that capillary hemorrhage may be so free as to simulate rupture of a large vessel yet after death careful examination may fail to discover any gross vascular lesion. Dunlafoy, (quoted by Howard) has pointed out that severe hemorrhage may occur as the result of a "pore-like erosion" of the wall of one of the large branches of the gastric arteries, without any marked ulceration of the surrounding mucus membrane or at most accompanied by an abrasion of so slight degree, that even at p. m. the lesion may be overlooked. This condition is styled "Exulceration Simplex."

Hemorrhage as direct cause of death is here estimated at 2 per cent in all cases. In three cases no bleeding point could be found.

*Pain.*—In the form of disease now under discussion pain occupies a position of minor importance in the symp-

tomatology, contrasting very sharply with its import in true ulceration. In my case the intensity was not sufficient to cause voluntary complaint on the part of the patient. What discomfort there was was referred to the epigastrium. The pain is not increased upon ingestion of food, a symptom which is among the most prominent and distressing in chronic ulcer.

*Vomiting.*—As already indicated, ceases after the expulsion of blood and clots from the stomach, and relief always follows. Tenderness exists, generally distributed over the abdomen, but accentuated over the epigastrium.

Howard, (A. J. M. S., Vol. cxxviii), makes some very interesting observations with reference to the relationship between pain and vomiting and the location of the ulcer.

His conclusions are that in ulcer of the pylorus vomiting is almost constant, as is pain. In ulcer of the lesser curvature, pain and vomiting of natural gastric contents occurred in only one-third of the cases. The anemia is profound and makes a picture which when once seen is indelible to the memory. The loss of blood, however, is rapidly retrenched and soon recovered from. In Howard's series of forty-four cases the average of sixty-seven blood counts showed the red corpuscles 4,071,000 per Cmm. The highest was 6,784,000; the lowest 1,012,000.

This series includes all forms of ulcer.

Osler reports a case of duodenal ulcer with hemorrhage in which the blood count fell to 700,000. Cabot says (quoted by Howard) that there is no single disease in which the red blood count is apt to be so low, with the exception of pernicious anemia. In my personal case I regret to say no blood count was made. Some rigidity is present in the epigastrium, and abdominal distension exists in a variable degree.

Pulse is that which one might expect in a case of acute anemia—rapid, feeble, and compressible.

*Temperature.*—In most cases reported it has been subnormal. In my case, though, it went in twenty-four hours of the hemorrhage to 103; in six hours it declined to 101, and gradually came to normal. In Howard's series (A. J.

M. S., Vol. cxxviii, p. 954) there was observed fever in 3 per cent. of the cases.

*Diagnosis.*—This condition presents some difficulties in differential diagnosis. Probably the most confusing is encountered in the case of chronic ulcer with acute exacerbation. In such a malady there can, by careful investigation, be brought to light a history of more than ordinary gastric disturbance, and subsequent events pursue a widely divergent course from that taken by simple erosion. The ulcer whose manifestations most closely simulate those of erosion is the small round type.

Esophageal varix is productive of a train of symptoms also which confuses the diagnosis.

Hæmatamesis as a means of vicarious menstruation should always be thought of. Hæmophysis can be distinguished by producing a hemorrhage less in volume, brighter in color, mixed with air, containing but very few clots, and they of small size. Rales in the chest and gradual subsidence of the flow; the patient expectorates blood-stained fluid for days.

*Prognosis.*—Graver in male than in female. In chronic gastric ulcer, the percentage of death due to hemorrhage is variously estimated at from 9.3 per cent. by Bramwell to 27 per cent. by Welch (A. J. M. S., Vol. cxxviii, p. 956).

Hemorrhage was the cause of death in 8.5 per cent. of the total number of deaths in Howard's series of chronic ulcer already referred to, and 29.5 per cent. of fatal cases.

As already noted, hemorrhage from acute ulcer shows marked tendency to subsidence. According to Blake (A. J. M. S., Vol. cxxviii, p. 989) the results of medical treatment in acute ulcer are extremely good. The prognosis is very grave in the post-operative variety. The cases so far having proved fatal with few exceptions.

*Treatment.*—The therapy of the disease is divided into medical and surgical measures; of which the former, medical, is the most important, because, according to Mayo Robson, 95 to 97 per cent. recover without operation. This refers, of course, to the cases exclusive of the post-



operative variety, which, as already noted, have a high rate of mortality under any form of treatment.

We will first notice the indications to be met in treatment. These, for obvious reasons, are presented in the order of their importance.

1. Control the hemorrhage.
2. Combat its immediate effects.
3. Tranquilize the patient.
4. Relieve pain.
5. Supply nourishment.
6. Compensate the anemia.
7. Prevent a recurrence.

Let us consider these indications *ad seriatim*:

1. *Control of Hemorrhage*.—This can, in the ponderating majority of cases, be accomplished by medicinal means. The first measure to be thought of during the progress of the bleeding is a full dose of morphia hypodermically administered. This tends to stop the flow of blood by its quiescent effect and the limiting, or even prohibitive influence which it exerts upon peristalsis. The classical combination with atropine should be studiously avoided. Next, agents competent to produce vascular constriction are to be exhibited. In Buck's case of post-operative hemorrhage he first gave a pill of lead acetate and opium. The hemorrhage continuing, he then gave, per ore, four doses of adrenalin chlorid every hour. The first two doses consisted of 30 minims each and the last two of 10 each. The patient recovered.

My own advice would be to supplement the administration of adrenalin with hypodermics of 20 minims each of some aseptic preparation of ergot as ergone or ergotole. These can be repeated every two hours for as much as 24 hours.

Subcutaneous injection of gelatin, or rectal injection of gelatin may be used with safety, prepared after the technique of Margoniner and Hirsch, (Year Book of Med. p. 486, 1904). They dissolve two grams in 100 cc. of warm normal salt solution, and then expose the flask on

hour to live steam at 100 c. This amount is given by hypodermoclysis.

Rectal injection is advised by Tickell (*Ibid*) who urges that given in this way, it is painless, free from danger of infection, and does not cause rise of temperature. The solution he prepares as follows:  $1\frac{3}{4}$  ounces of gelatin are dissolved in  $2\frac{3}{8}$  pints of boiling water and boiled gently for one hour, then cooled to body temperature and  $\frac{1}{2}$  pint slowly passed into the rectum from an irrigator. The injection is given three times daily.

I, myself, would modify this technique by adding to each rectal injection 30 grains of calcium chloride. We become a little disheartened in reference to the use of gelatin when we recall that in two years 23 cases of fatal tetanus have been recorded.

Auxillary means are employed with most gratifying effect and should not be overlooked. As such may be mentioned the application of the ice bag to the epigastrium. Elevation of the foot of the bed and hot water bag to the feet to divert as much blood as possible. All food, per orem, should be immediately forbidden, as advised by Lambert, (*J. A. M. S.*, Vol. cxx, p. 983). Ice in large lumps may be given to the patient to be swallowed whole. If the stomach is filled with clots, Lambert also advises the use of the stomach tube to empty the viscus and allow its walls to contract.

According to Savariand, who analyzed 54 fatal cases and (quoted by Mayo Robson) showing the prolongation of life after the initial hemorrhage. In eight cases death was rapid. In 19 the fatal issue supervened in 24 to 36 hours.

These measures for the control of the hemorrhage, having proven futile, surgical procedure must be undertaken.

The method of choice at present to perform abdominal section and according to F. G. Connell in (*Annals of Surg.* Vol. xl) to employ one of nine measures, viz:

1. Excision of ulcer.
2. Partial Gastriectomy.

3. Ligation of principal artery.
4. Cauterization, or curettage of ulcer.
5. Ligation of mucous membrane.
6. Ligation of A1 coats.
7. Gastro-enterostomy.
8. Pylorophosty.
9. Gastrotomy.

The operator must be governed in the choice he makes by the exigencies of any particular case. Gastro-enterostomy is nearly always advisable, whatever other therapy is employed.

Moynihan holds that this step alone is sufficient to control the hemorrhage, and that it is useless and positively harmful and unnecessary to search for the bleeding point.

In the two cases reported by Robson, the bleeding points were sought out and tied, and the mere opening of the stomach and the exposure of its mucosa to air acted as hæmostatic measures.

Moynihan's view as to the want of the necessity of gastric exploration and the efficacy of gastric enterostomy is not borne out by results in the hands of other operators, the vast majority of whom are strenuous in their demands that we supplement our gastro-enterostomy by direct attention to the bleeding point itself.

Connell's fatal case, in addition to the published experience of others, should be of sufficient evidence to convince one of the necessity of exploration and direct treatment. (See Joy, J. A. M. A., Vol. xxxix, p. 508.)

When to operate upon cases of acute gastric hemorrhage is a question upon which the authorities appear to be agreed, and the prevailing opinion, as expressed by Blake and Robson, is that, in view of the fact that the percentage of recoveries in cases which have shown no antecedent symptoms is so very large that operation is not justifiable till after the second or third hemorrhage, but, in the presence of antecedent symptoms, operation should be performed at once.

All cases suffering from recurrent hemorrhage, whether large or small, should be operated upon.

Denlefoy is of the opinion that every case which loses as much as one-half litre of blood or more, should come to operation immediately. It is beyond the scope of this paper to enter into the methods and technique of gastro-enterostomy. Suffice it to say that the therapy of the operation is contained in the rest it supplies to the ulcerated area and the drainage to the stomach which it promotes. Combating the immediate effects of the loss of blood should next engage the attention of the attendant.

First, let us understand that cardiac whips should be avoided. Intravenous and subcutaneous infusions of saline should be eschewed, as such agents tend to dislodge the clot that has formed in the eroded vessel. In my own experience of one case I shall hold the hypodermic injection of nuclein solution, suggested to me by Dr. Speidel, in thirty doses every three hours, in grateful remembrance. I also employed ergotole the same way. Morphine given hypodermically whenever necessary quieted the patient and satisfied the distressing air hunger.

Rectal injections of saline, one pint at a time, relieved the consuming thirst. Rectal alimentation was begun after twelve hours and kept up exclusively four days, after which a teaspoonful of predigested milk at two hours' interval was gradually increased slowly until two pints were taken in twenty-four hours. Later the milk feedings were alternated with vegetable purer and the return to solid food effected with great caution.

The case, briefly reported, is as follows: Mrs. B., primipara; on the ninth day after a forceps delivery, which was otherwise uncomplicated, she spent a restless night, and the next night began to vomit blood in great quantity, as much as two pints at one time, with melæna following. This was repeated three days later and again after two days. After eight weeks of suspense the patient recovered under the treatment.

As outlined above, two features in this case were very prominent, aside from the hemorrhage. One was the enæmia which was the most profound I have ever known.

The other was the cerebral disturbances shown in delirium for as much as a week.

This was followed by a stage of mental habetude and stupidity, and that obtained even after the patient had resumed her accustomed mode of life, and at the present time (twelve weeks after the initial hemorrhage) there was a noticeable cloudiness of the intellect

Reverting to general treatment, and since writing the above, I have found records of a report (J. A. M. A., Vol. xlv), by Mr. Moynihan, detailing a series of 22 operated cases for the arrest of hemorrhage. He had 19 recoveries. Excision of the ulcer was practiced in but one case. In that, death resulted on the eighth day from recurrence of hemorrhage.

Robson's two cases reported in his book on Surgical Diseases of the Stomach, and briefly abstracted, are as follows:

CASE I.—Woman, aged 33 years. Week previous to operation was seized with hæmetemesis; attack recurred four days later, and again on the day of operation. The patient presented no previous history referable to stomach beyond slight indigestion. Medicinal measures proving without avail, section was performed.

There were no indications on surface of stomach to indicate disease. The stomach was opened and seven bleeding points were revealed, two of which were ligated. The organ was then closed and a posterior gastro-enterostomy was performed. Recovery followed.

The next was a man 28 years of age. The day previous to first hemorrhage patient was out hunting and felt well. The next day at noon patient became faint and a pint of clotted blood. Five days later hemorrhage recurred, and again four days later. On opening the stomach no definite ulcer was perceptible, but a considerable number of bleeding points, three of which were ligated *en masse*, and the whole interior of stomach was swabbed with a sponge saturated with tr. hamamelis. Gastro-enterostomy was performed. Recovery followed.

I abstract this report to show the similarity existing



between my personal case and the ones here recorded, in every particular, save the indications for treatment.

Referring back to hæmetemesis as a means of vicarious menstruation, we again call attention to the fact that they usually yield readily to medical treatment. Peterson operated on three cases which terminated fatally.

Moyo Robson records four fatal cases of post-operative hæmetemesis. Winslow, one, and Mansell Moulin, one. Von Eiselberg, eight, Reichard, two, Dr. Robert Purves (quoted by Robson) collected 37 cases, 29 of which followed abdominal operation. Of the 29 cases reported, the mortality is 69 per cent., and another series of two cases is reported by the same author, in which the mortality is 72.5 per cent. General measures of treatment are advised.

#### DISCUSSION.

DR. J. R. WATHEN: I believe that Dr. Hendon has presented a paper that is exceedingly valuable to a Society of this kind. He has covered the ground from every aspect, and, as it is a paper upon a subject which is attracting an immense amount of attention from the profession, I believe we should look into the various methods of treatment with a great deal of care. Formerly this department belonged to internal medicine, and today, if I am not mistaken, many of the men who decide that it is due to digestive disorders still treat a large number of these cases and only send them to the surgeon as a last resort, and for this reason mortality is necessarily high. I believe that the best work done along this line has been done by the surgeons. I believe at this time that surgery offers a great deal in selected cases. The exact treatment of the condition will depend upon the pathological condition that we have to deal with. While many cases may be relieved by one method there are other cases in which there are so many obstacles to surgery that it cannot be relied upon entirely.

I hope the gentlemen speaking from the standpoint of the general practitioner will go into detail in regard to the exact action of adrenaline. It is a much-disputed point at this time, some men claiming that it has no contracting action when injected into the blood and that only has a localized action when applied to the surface. This is claimed by men doing eye work,

and that in medicine and surgery, while it does have a useful field, it is not in controlling hemorrhage.

These cases, fortunately do not occur very frequently, and I believe that surgery should be resorted to in time, but it should not always be the first resort.

DR. LUCAS: I have never had but one case so far of acute hemorrhage such as described by the essayist. We do not mean hemorrhage as seen in ulcer. The case in mind was one following an abdominal operation several weeks ago. The patient was in a reduced state and in a bad condition at the time of the operation, so that I used a stomach tube with fear and withdrew a quantity of bloody material. The patient had nothing by mouth for several days, and I washed out the stomach with hot water for the vomiting afterwards. The condition of the patient was such that no operation could be considered, and death resulted twelve hours later.

I have always taken the view, so far as acute ulcer of the stomach is concerned, that if they have a second hemorrhage the case ought to be opened up. I have had experience in several cases where they have had more than one hemorrhage, but an operation was refused. I have only lost one case from what I believed to be ulcer, and that was a case where the patient had some stomach symptoms eight months previous to a criminal miscarriage. Following this miscarriage which occurred on Monday she did well until Friday, and on that day she had a uterine hemorrhage. Her physician stopped it. The patient went on three weeks and developed gastric hemorrhage. I saw her with a pulse of 150 and cerebral symptoms well marked, and the most profound anemia. I did not think any of our operators would be willing to tackle the case. She was given hypodermics of morphine, and adrenaline was given internally, and saline solution was used according to the Murphy method. At the end of twenty-four hours she showed some evidences of returning circulation, but three days later she developed a profuse hemorrhage and died in three hours. I did not reproach myself in the case, because it was rather unusual from the profuse uterine hemorrhage and she was in very bad physical condition.

So far as the use of adrenaline is concerned, I have a man who has had frequent hemorrhages from the stomach not due to ulceration. He has the hemorrhages and develops fever. He has had an enlarged spleen for twenty years. The only way that I can account for the hemorrhage is the damming back of

the circulation. That man always carries adrenaline with him and it has invariably checked the hemorrhage every time he has had one. In the last seven months he has only had one and that but slight, but in the previous twelve months he has had a dozen. In February a year ago his hæmoglobin was 30 per cent; six weeks ago it was 56 per cent.

So far as the question of operation is concerned, I think the general run of surgeons take it to themselves to blame the specialist for the patient's refusing operation. Even if the surgeon is called in early it is difficult to get the patient to consent to an operation. Gastro-enterostomy does not control the hemorrhage in all cases. I have read the reports of some surgeons where it does not control the hemorrhage.

DR. HENDON: I feel that I have already transgressed upon the time of the Society and I thank the gentlemen for the discussion.

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## REPORTS OF CASES.

BY J. B. LUKINS, M. D.,  
LOUISVILLE, KY.

E. E.—Boy, aged 13, admitted to Louisville City Hospital June 15, 1907. In playing with a boy friend a shot-gun had been accidentally discharged, inflicting what was at first glance a serious wound to upper third of right arm. The patient was almost pulseless and in a profound state of shock. Was immediately put on the table and anæsthetized. After the pieces of clothing and gross dirt were removed and the hemorrhage controlled, the wound was examined and found to be shot through and through from before backward. The shot was from close range, practically all the load taking effect in one place, and as a result the arm was almost completely torn from the body. The wound of entrance was four inches in length and two in breadth wound of exit only slightly smaller. Destruction to the soft tissues was very extensive, to the outer side only the skin and a few muscular fibers remained, to the inner side there was probably half an inch of tissue incorporating the artery and vein. Five loose fragments of bone, varying in length from half an inch to three inches were removed; this left a space of about two inches between the ends of the two fragments.

Realizing the exceptional gravity of the case, considering the inestimable worth of the arm to a boy of this age, it was

deemed advisable to exhaust all modern surgical means to save the limb before amputation was done. After cleansing and sterilizing the wound, two large rubber tubes filled and wrapped with sterile gauze were inserted and constant irrigation with aluminum acetate was begun. This was arranged to flow drop at a time in quick succession, using about five gallons in 24 hours.

The pain subsided within twenty-four hours. For a few days there was slight œdema of the elbow and forearm, due to the hyperemia and lack of adequate means for the return circulation, the remaining lymphatics and vessels having not yet accommodated themselves to increased amount of work.

All along the wound has been practically free from pus, bodily temperature from 98.5 to 100 degrees. Small particles of tissue in which the vessels were entirely obliterated have from time to time sloughed off; other than these there have been no untoward symptoms.

The muscles of the shoulder, unresisted in their action, have contracted and pulled the lower end of the upper fragment of bone upward and outward; this is being held down in place by a strip of adhesive passing around the body and over the end of the bone.

The wound is healing nicely and rapidly by granulation, callus is being well formed, circulation to the part has been re-established and the cavity of the wound is being gradually obliterated, partly by the growth of the granulations and partly by cicatricial contractions by which the edges of the wound are approximated.

As soon as the repair of the soft tissues is sufficient to justify it I propose to approximate the ends of the bony fragments either with silver wire or large sized chromic cat-gut.

There is now no question but what the boys arm will be saved, and while I do not expect perfect results, I will never regret that I did not clip the remaining strands of tissue and allow the boys arm to drop off. The constant irrigation with aluminum acetate has truly worked wonders in this case, and I heartily recommend it to the profession for further proof of its efficiency.

L. B.—Male, colored, age 45, admitted to Louisville City Hospital, June 23, 1907, holding his stomach and full length of intestines in his arms. The viscera were protruding from an open wound in his abdomen which had been made about an

hour previous; was a stab wound about seven inches in length in the left hypochondrium. In this condition he had started to walk to the Hospital but becoming too exhausted sat down on a door step where thirty minutes later he was picked up by the ambulance.

My staff doctor was immediately telephoned for and the operating room ordered prepared, but on further examination it was evident from the extreme state of shock, due to the long exposure of the abdominal viscera, the patient would be dead before it would be possible for the staff doctor to arrive.

With the aid of a small negro boy and the male colored nurse the patient was anæsthetized and the operation performed with only partially aseptic surroundings.

Strange to say there was no perforation of the intestines; there was a small contused area in the omentum and one bleeding point in the mesentery. The abdomen was full of loose blood clots and there was considerable hemorrhage from the abdominal wall; the clots were removed, hemorrhage controlled, hot towels applied to the viscera, after which they were placed in the abdomen, and the incision closed with interrupted silk worm gut sutures.

Anticipating a great amount of infection two large drains were inserted, but much to our surprise it was found unnecessary at the end of seventy-two hours to continue drainage longer. The shock was overcome by the use of saline, per rectum, and within eighteen hours the patient was bright and cheerful and asking for food.

There has never been more than a few drops of pus; patient made a rapid recovery, being able to sit upon a chair on the seventh day.

This case serves as remarkable illustration of what large quantities of infectious material the peritoneum is capable of caring for.



## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, APRIL 16, 1907.

DR. JOHN R. WATHEN: I intended to have a clinical case and a radiograph to illustrate the clinical case, but, like many of those cases, the patient did not turn up. I would like to report the case. Last August a man was treated for a fracture of the humerus about the insertion of the deltoid. Good bony union occurred, but later he noticed the loss of use of the extensors of the hand and complete drop-wrist. When I saw the case I made a diagnosis at the time of injury of the musculospiral nerve, but this came on rather slowly, and for that reason I did not believe that the musculospiral was severed at the time of the injury, but that paralysis developed from pressure later. I made radiographs at different angles, and each one showed a projection of callus above the longitudinal axis of the bone. I advised an operation and made an incision at the outer side of the arm, dissecting carefully down to the nerve and found it lying imbedded in the callus. Then, with the chisel and Rongier forceps, I removed that part of the bone pressing upon the nerve. That was done in January, and now the man has completely recovered the use of the hand and is able to return to his work.

DR. MARSHALL: This is certainly an interesting report. It shows the value of the X-ray machine in locating the callus as the probable cause of the trouble and where to cut down, and saved much injury to the hand where an exploratory operation would have been made under the old system. I think it is a very satisfactory report from every standpoint.

DR. WEIDNER: Dr. Marshall has expressed my sentiments in regard to the case completely.

DR. MARSHALL: Some five weeks ago I took charge of a woman with an enormously swollen leg. The leg was swollen from the foot to the knee until it was twice its normal size and almost the size of an elephant's leg. The shape of the foot was lost in the swelling. The part was of a dusky-red color, typical of erysipelas. At first it presented no appearance of suppuration anywhere, and, seeing it a few days later, there was suppuration over the instep, which was incised and a quantity of dirty pus removed. Then a few days later a second abscess

formed over the internal malleolus, and then in a few days one two or three inches up on the shin and so on, so that to-day, at the end of five weeks, she is now emptying an enormous abscess just above the knee, between the junction of the middle and lower third of the thigh and the knee joint, and in that region there is an enormous abscess, which is pouring out a great quantity of pus. The woman is standing up well under the great loss. I have given the mercurials and iodides and supportive treatment.

DR. WEIDNER: What is the diagnosis?

DR. MARSHALL: Phlegmonous erysipelas.

DR. LEAVELL: I just arise to say something about the use of the antistreptococcic serum in the treatment of these cases. I have treated quite a number of cases with antistreptococcic serum and have obtained some good results with it, and would suggest that to Dr. Marshall, in view of the fact that he has not gotten the infection under control. I think he may get some benefit from this. It is harmless if it does not produce any results, but it has produced some satisfactory results at my hands.

DR. WEIDNER: I simply arise to give a sort of consecutive or subsequent report of the case I reported at the last meeting—of pruritus in a woman pregnant about seven months—which was discussed very freely at the time. The suggestion was made at the time and the question had been asked whether it was permissible to induce labor before the natural termination in order to relieve this woman of the terrible itching. I stated at the time that I had not been able to relieve her after two weeks or more of treatment here. The woman went home about a week afterward, and the doctor—an intelligent young doctor—asked me to send him a nurse, as he had determined and did produce premature labor, which terminated her pregnancy at about seven months and three weeks—not quite eight months. I have gotten a letter stating that the woman was delivered of a six-pound living baby, and the mother is doing well. I have since heard from him, and he says that the woman is relieved of this terrible pruritus.

I have nothing to add as to the cause except as suggested, that it was caused by some toxines produced during pregnancy expending their force upon the nervous system. I also found but two cases mentioned in the American Text-book of Obstetrics.

I have one more report to make as a matter of interest. I

saw the case to-day at the City Hospital. A colored child seven years of age was brought to the Hospital by the mother, with a history that the child had been badly dealt with by a man and she wanted the child examined. The vulva and external genitals were covered with a milky pus, and pus was seen to ooze out of the vaginal opening through the opening of the hymen, which was intact, the opening not being bigger than the small point of my finger, corresponding with the size in a child of that age. The negro made a poor impression on me, as she had a rather flip manner. I ask her what had been done to her, and she said, "He did me dirty." I did not insist upon questioning her further. The mother stated that the man, who seems to have been arrested—about sixteen years of age—in the presence of some other women, had grabbed the child and thrown her down. Of course those things are ugly to deal with. These cases are of interest from a medico-legal standpoint.

I asked the mother the character of her family. She has six children. I asked her about their health. She said that one girl was sick and had been in the hospital; she had had two buboes that were lanced. I told her that her daughter had gonorrhea and might have given it to this child. The pus was examined and shown to be gonorrheal pus. The child was seven years old.

The interesting point lies in the age of the child and, of course, also in the legal question in these cases. We ought to be very careful in judging. I have seen a case of gonorrhea in a child four years of age supposed to have been contracted from an older member of the family.

DR. SATTERWHITE: I want to state in this connection that many years ago when I was in charge of a dispensary here in the city that a woman brought a child three or four years of age with a profuse vaginal discharge, and the gonococci were found in the pus. I attributed it to the fact that the mother might have had some gonorrheal pus on her hands, and in cleansing her child inoculated it in that way. So it might have been the same way in regard to this.

DR. HANES: This is a subject that is very interesting to us all, because at some time we may have had some personal experience. I saw a little white girl, three and a half years of age brought to my office about two months ago. She had a profuse vaginal discharge, and, not caring to treat the case I referred the case to another doctor, and he examined the discharge and

told me that he had made two or three examinations, and in every examination he found the gonococcus. I think this girl became infected, so the mother said, by playing around in bed with a man whom she knew was infected with this disease. I saw a little boy, I remember, when in the clinic in New York, five years of age, and he had a typical case.

DR. WILLMOTH: Speaking of the age at which the child is infected with gonorrhea reminds me of a case that was brought to me about six weeks ago by a doctor from a neighboring town. The patient was a little girl three and a half years old. She had a discharge from the vagina. As soon as I examined her and saw the pus and the irritation about the vulva I suspected a gonorrheal infection, and I obtained a specimen of the pus and sent it to the laboratory of the college, and it was found to be a typical gonorrhea, and I told the father, the mother being out of town, that the child had a typical gonorrhea and asked him if he had any idea where the child got it. The family physician asked him if he had it himself, and he said not. He said that the negro cook working for them for several months had it, and they had found it out and fired her. Now, the question arose whether she had inoculated this little child purposely after she had been dismissed. The child still has a slight discharge from the vagina. She is a timid little child and dislikes to be exposed. Probably she objects to the treatment more than anything else. This little girl was three and a half years of age and was probably inoculated by this colored nurse in the family. The doctor said that there was no one else from whom the child could get it, as, if anyone else in the country had it they would naturally come to him for treatment.

DR. WEIDNER: I have nothing to say except that I would emphasize the importance of these cases from a medico-legal standpoint. The important question hinges upon the pathological examination. Many children have simply a catarrhal condition. I have seen that in young children from some little infection, but the proof of the gonococcus is, of course, most important when it comes to the question of the infection being caused by an outsider.

THE

# American Practitioner and News.

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## Editorial.

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*Shock.* I believe that in nine cases out of ten a man who has been injured, and is in the most profound state of shock, the first dose of medicine that he will get will be strychnine or nitroglycerine. I must admit that it is hard to resist the use of these powerful forces when we see the machinery of life running down, and in a great many cases we see apparent results. I believe, though, that it is when the shock is not so profound that we are dealing more with a collapse than with the shock proper; that we have a suspension of functional activity rather than an exhaustion of vasomotor energy.

A patient in a state of shock the vascular apparatus is in a state of inertia, as a result of over stimulation and exhaustion of the vasomotor centre in the medulla; the over stimulation has in its last impulse driven all of the blood into the venous system; the visartergo is lost and there is no force then active to drive the blood to the heart and through the lung; the cardiac and vasomotor centres are anemic, all energy has been utilized, and with an anemic respiratory centre nutrition and oxygen are cut off. The entire muscular apparatus is relaxed and suffering nutritional changes the general condition is one



of lowered blood pressure. The one pathologic condition to be overcome is anemia of the arterial system, to get the blood out of the veins and into the arteries.

Suppose we give strychnine, we try to stimulate a centre that is exhausted and trying to accumulate energy but can't get blood to work; an exhausted centre must bring on a greater degree of paralysis. Strychnine increases susceptibility to shock by making nerve terminals more impressionable, and every peripheral impression carried to an exhausted centre causes greater depression. The average practitioner repeats the hypo of strychnine almost *ad libitum* if the patient does not respond after the primary injection. I think this very well when there is merely a collapse to deal with, where there is only a suspension of force and not an exhaustion; but think what damage these repeated doses will do in a state of exhaustion of energy.

If strychnine would stimulate the heart muscle without acting directly on the vasomotor centre too, then we would have the ideal drug, for the blood would be pumped out of the veins and sent around to the vascular centres, giving them nutrition and bringing up blood pressure in that manner.

Now, as to nitroglycerin, we know that it in acting on the vascular centres stimulates the vasomotor dilators, increases the caliber of the blood vessels, that is the arterioles if there is any energy left in their centres, and this not only lowers vascular tension even more, but exhausts the vasomotor centre as well, being even more detrimental than strychnine.

When a patient in apparent shock does not respond favorably to the first hypo of strychnine and nitroglycerine there is no doubt in my mind but that each succeeding dose makes the shock more profound by the continuous exhaustion of motor energy as fast as it is accumulated.

Why take this chance when we can obtain better results without risk, when by giving a hypo of morphine we lessen susceptibility to shock. By hot application we stimulate the vessel muscle direct without acting on the

centre, the heat also preventing a lowering of body temperature lessening tendency to shock, and then with hypodermoclysis or saline in the rectum we bring up blood pressure. There is no doubt but that a small amount of adrenalin which acts directly on the vessel muscle is of great assistance in raising blood pressure, but as yet there is some doubt as to the parenchymatous changes that take place as a result of the use of adrenalin. In the treatment of pneumonia we are taught that to whip up a fagged heart will cause it to quit work; then why do we so persistingly try to stimulate a centre that is exhausted.

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#### NOTES AND PERSONALS.

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The Southern Medical Association will hold its next meeting September 24-26, 1907, at Birmingham, Ala.

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Dr. William Seaman Bainbridge, of New York City, received the degree of Doctor of Science at the annual commencement of the Western University of Pennsylvania.

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We acknowledge the receipt of a copy of Welcome's Photographic Exposure Record and Diary for the year 1907. To those interested in photographic it will prove quite a convenience and help, and as a pocket diary it is compact and useful.

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After September 15th, the office of the AMERICAN PRACTITIONER AND NEWS will be on the second floor of the Atherton Building.

## Recent Progress in Medical Science.

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IN CHARGE OF

E. S. ALLEN, M. D.,

LOUISVILLE, KY.

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**Practical Therapy and Theory of Opsonnis.**—The *Columbus Medical Journal*, in its August issue, contains a most interesting report of cases by Dr. Ohlmacher, in which he has successfully used opsonic therapy.

He has obtained marked results in curing infectious fistulas, empyema, tuberculus conditions and gonorrhea.

He reports a case of empyema in a girl 18 years of age, who had had an attack of pneumonia with a crisis at the end of one week. For ten days afterwards the temperature remained between 99° and 100° and then rose to 102° F., accompanied with some dyspnoea and pain in the right chest. Three days after this rise in temperature there was dullness in the lower right chest and on an exploratory aspiration a thick pus was obtained in sterile glass syringe.

A small drainage tube was inserted with the evacuation of about 8 oz. of thick pus, but the lung did not expand. Smears of the pus showed pneumococcus from which an opsonage was prepared. Three days afterwards the patient received an inoculation of the autogenous bacterial preparation containing approximately 12 million pneumococci.

The patient was much emaciated; temperature 100°, pulse 120, and a profuse discharge of pus. Four days later the patient was much improved, discharge becoming scanty, lung expanded and drainage tubes pushed out. On the sixth day a second inoculation was made; on the seventh day the wound had entirely closed. The little girl was eating, had gained flesh and strength and free from pain or fever.

He states that not all cases do so well, some respond rapidly, others are more stubborn. A single inoculation may suffice to establish a sustained high tide of immunity, while again the treatment must be long continued to reach this end.

There is no doubt but that it is high time this opsonic therapy was becoming more generally practical in infectious cases.

The Journal of the American Medical Association, August 17th, 1907, contains an interesting article on the Biers stasis treatment of infectious conditions. Dr. Willy Meyer's article

goes into detail as to treatment relating a number of cases treated successfully by this method. It is claimed that by the Bier method that in infectious conditions, especially of the tubercular type, that creating an interrupted hyperemia you give the affected part more nutrition and thereby increase cell resistance.

He gives an example of a patient who came into his clinic suffering with a typical tubercular osteomyelitis of the elbow. When the patient entered the hospital he was supporting the arm in the well hand; the patient objected to being operated on, so the Bier's method was used. A rubber bandage was systematically applied from just above the elbow to the shoulder; the bandage was applied just taut enough to compress the superficial veins of the arm making little or no pressure on the arteries; care must always be taken to see that the radial artery is pulsating freely. The bandage was removed twice during 24 hours and left off from two to three hours, to prevent pressure atrophy from taking place at seat of application, and the arm was thoroughly massaged to stimulate nutrition in the area rendered anemic by the bandage. The next application of the bandage was to be just a little higher up the arm and the following just a little nearer the elbow; so for nine months this treatment was kept up when the man presented himself thoroughly cured with good functional result. The man was a fireman and resumed his old occupation with no inconvenience. In each case where the bandage is skillfully applied pain disappears very rapidly. If pain and swelling increase after application more harm than good will result, and the bandage should be re-applied, each layer of bandage over lapping a part of the layer just applied.

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## BOOK REVIEWS.

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### HYGIENE OF NERVES AND MIND IN HEALTH AND DISEASE.—

By August Forel, M. D., formerly Professor of Psychiatry in the University of Zurich. Authorized translation from the Second German Edition, by Herbert Austin Aikins, Ph. D., Professor in Western Reserve University. G. P. Putnam's Sons, New York and London. The Knickerbocker Press. 1907.

This is the fifteenth number in Putnam's Science Series and makes an admirable addition to those already published. The first chapter is devoted to a summary or review of the principles of psychology. The terms used in this subject are clearly and carefully defined; for example, "Suggestion." By suggestion

is understood a very peculiar kind of psychic (*i. e.*, mental), or, more properly, psycho-physical, reaction, in which an idea—usually connected with a perception—becomes so intense and narrow, the mind becomes so filled with “one idea,” that this idea loses its ordinary associations with its corrective counter-ideas, breaks violently through common restrictions and releases cerebral activities that are usually independent of it, and generally, if not always, subconscious.

The second chapter is a brief review of nervous anatomy and is followed by an interesting chapter on the relation between mind and brain. Then ensues a thorough discussion of the physiology of the nervous system. While this makes a somewhat lengthy introduction to the work, yet it is done in so able a manner that it paves the way for the practical application of what we know of man's nervous economy. The purpose of the remainder is, in the words of the author, “to enable an intelligent layman with a fair education to govern his life in such a way as to avoid diseases and abnormalities as far as possible, for himself, his fellowman, and his offspring.”

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#### BOOKS RECEIVED.

AMERICAN PRACTICE OF SURGERY.—A complete system of the science and art of surgery, by representative surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., LL. D.; Albert H. Buck, M. D., of New York City. Complete in eight volumes, profusely illustrated. Volume III. New York: William Wood & Co., 1907.

THIRD TREATISE ON THE EFFECT OF BORAX AND BORIC ACID ON THE HUMAN SYSTEM. (With diagrams.)—Being a critical review of the report of Dr. H. W. Wiley, Chief of the Bureau of Chemistry of the U. S. Department of Agriculture to the Secretary of Agriculture.—By Dr. Oscar Liebreich, Professor der University Berlin and Geheimer Medizinalrat. (Translated from the German.)

SUCCESS; THE SURGICAL DESIDERATUM.—A. Earnest Gallant, M. D. New York, N. Y. Reprint.

DIAGNOSIS AND TREATMENT OF SOME OF THE ORDINARY DISEASES OF THE RECTUM.—By Lewis H. Adler, Jr., M. D., Philadelphia, Pa. Professor of Diseases of the Rectum, Philadelphia Polyclinic and College for Graduates in Medi-



## This Index Finger

- serves to point out and accentuate the fact—already known to thousands of physicians—that two tablespoonfuls of Colden's Liquid Beef Tonic, administered ten minutes before each meal, will produce far more effective results in the treatment of atonic dyspepsia than can be obtained by the exhibition of unlimited amounts of pepsin.

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cine; Prosector to the Professor of Anatomy, Medical Department of the University of Pennsylvania; Consulting Surgeon Charity Hospital, etc. Read before the meeting of the Lancaster City and County Medical Society, Lancaster, Pa. Reprinted from the Medical Council, December, 1905.

RENSSELAER POLYTECHNIC INSTITUTE BULLETIN. — Some Buildings and Laboratories of the Rensselaer Polytechnic Institute, Troy, N. Y. December, 1906.

THE CURE OF PSORIASIS, WITH A STUDY OF 500 CASES OF THE DISEASE, OBSERVED IN PRIVATE PRACTICE.—L. Duncan Bulkley, A. M., M. D., Attending Physician to the New York Skin and Cancer Hospital; Consulting Physician to New York Hospital, New York City. Reprinted from the Journal of American Medical Association, November 17, 1906.

REPORT OF A CASE OF URETHROVESICAL CALCULUS WEIGHING 845½ GRAINS.—By Samuel E. Earp, M. S., M. D., Indianapolis, Professor of Practice of Medicine, State College of Physicians and Surgeons; Consultant to St. Vincent's and Protestant Deaconess' Hospitals, etc. Read before the Indianapolis Medical Society, October, 1906. Reprint.

SIX ESSAYS ON THE CURE OF CONSUMPTION WITH SUBCUTANEOUS INJECTIONS OF OILS.—Published in the Medical Brief, August, 1906.—By Thomas Bassett Keyes, M. D., of Chicago. Reprint.

MEDICAL SPECIALISM, WITH ESPECIAL REFERENCE TO PROCTOLOGY.—Lewis H. Adler, Jr., M. D., Professor of Diseases of the Rectum, Philadelphia Polyclinic and College for Graduates in Medicine; Prosector to the Professor of Anatomy, Medical Department of the University of Pennsylvania; Consulting Surgeon, Charity Hospital, Philadelphia. Reprinted from the Journal of the A. M. A., October, 1906.

DESCRIPTION OF A SINGLE-STITCH OPERATION FOR ADVANCEMENT OF THE EXTERIOR OCULAR MUSCLES.—Chas. A. Oliver, A. M., M. D., Philadelphia. Reprinted from Ophthalmology, January, 1906.

RIGHT PULSATING EXOPHTHALMOS; LIGATION OF BOTH THE RIGHT AND COMMON CAROTID ARTERY AND THE LEFT INTERNAL CAROTID ARTERY; ACCIDENTAL TRAUMATISM. CURE.—By Chas. A. Oliver, M. D., Philadelphia. Reprinted from the New York Medical Journal and Philadelphia Medical Journal Consolidated, for April, 1904.

### ANTIPHLOGISTINE VERSUS OPIUM.

Inflamed states of the various organs of the body frequently give rise to pain of such urgent character as to demand active steps looking to its relief. Upon seeing the patient for the first time (he has called his physician because his suffering has become intolerable), the medical attendant is met with a peremptory demand for relief from the suffering.

With a willingness, which frequently overrides their better judgment, some physicians resort to the hypodermic needle indiscriminately, and, in too many cases, a greater evil has followed the lesser one. The free habit of using morphine or some other form of opium is not a judicious practice, and for several reasons. The exact seat of an inflammation, for instance, might become difficult to locate, and thus a clear diagnosis interfered with. But the greater objection to the use of opium is the possibility of adding a recruit to the ever growing army of habitues.

Every time there occurs to a doctor the apparent need for opium he should deliberate well before resort is had to the needle.

*Con m ad.*

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**RIGHT NOW WRIGHT.**

If after careful consideration his best judgment advises the use of opium, it should be given in some form by mouth. If the needle is used the patient at once knows what he is getting, but he is not so likely to acquire this information if it be given otherwise.

For relieving the pain of the inflammations Antiphlogistine will easily take the place of opium. The relief following may not be so prompt and so complete, but the edge of the suffering is taken off within a short time, and soon the patient is in a comfortable condition and has escaped the possibility of becoming addicted to a drug. There is not the likelihood that a patient relieved from pain by it, will begin eating or using Antiphlogistine in any other way, which likelihood is the greatest disadvantage of opium.

In the future let your morphine become stale, and keep your Antiphlogistine fresh, use it in inflammation.—*The Medical Era.*

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### PERTINENT THOUGHTS.

The epidemics of la grippe which have made their annual on slaughts for some years, have taught us that this disease, once considered of no serious consequence, is so dangerous and difficult to treat, that any suggestion regarding medication is always gratefully received.

With each succeeding visitation of this trouble we have found it more and more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently we have relied upon mild nerve sedatives, anodynes and heart sustainers, rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encouraging action of skin and kidneys, with possibly minute doses of blue pill or calomel. We have found much benefit from the use of Antikamnia and Codeine Tablets in the stage of pyrexia and muscular painfulness. This tablet contains  $4\frac{3}{4}$  grs. antikamnia, and  $\frac{1}{4}$  gr. sulphate of codeine, is a sedative to the respiratory

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Our Elixir contains 45 grains of the Paraldehyd in each fluid ounce, dissolved in an aromatic menstruum whereby the objectionable taste of the chemical is to a great extent disguised, and the preparation rendered palatable.

Dose—10 per ct. 2 to 8 fl. dr. Pint Bottles. \$1.50.  
N. B.—We also make 25 per cent. strength.

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centers. In the treatment of la grippe and its sequelæ its value is highly esteemed. In diseases of the respiratory organs following an attack of la grippe, pain and cough are the symptoms which especially call for something to relieve. This combination meets these symptoms, and in addition controls the violent movements accompanying the cough. To administer these tablets in the above conditions, place one tablet in the mouth allowing it to dissolve slowly, swallowing the saliva. Exhibited in the grinding pains which precede and follow labor; in the uterine contractions which often lead to abortion; in the various neuralgias and in all neuroses due to irregularities of menstruation this combination affords immediate relief. In these last conditions always instruct that tablets be crushed before taking.

If there is sudden rise of temperature after appendicectomy, examine the rectum. A bulging of the wall of the rectum on the right side indicates the formation of a pelvic abscess.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a down-right fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

### A FEW REASONS FOR SOME UNSATISFACTORY RESULTS IN THE TREATMENT OF ANO-RECTAL DISEASES.\*

BY BERNARD ASMAN, A. M., M. D.,

*Professor of Proctology and Medical Jurisprudence, University of  
Louisville, Medical Department.*

LOUISVILLE, KY.

A CORRECT diagnosis is always a first essential. Without it all treatment is the merest guess-work. Both trite and true would be the ordinary observation, and yet how often do we find it lost sight of in examinations hastily made and treatments begun before the real character of the disease is understood. From this, then, to be brief, it appears that a most careful and rigidly thorough examination must be made in every case, even though it at first appears to be very simple and of minor importance. Not wishing to appear unduly insistent, yet, to the writer, it seems that the above holds true in a greater degree, if possible, in the practice of proctology than in that of any other department. Illustrations might be multiplied to emphasize and make clear this contention; a few, however, will suffice.

Dysentery not infrequently forms a stumbling block, because of an incorrect, or at least incomplete, diagnosis.

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Read before the Mississippi Valley Medical Association, Columbus, Ohio,  
October 8-10, 1907.



How easy, after listening to a patient's rehearsal of such symptoms as loose or watery and frequent discharges of fecal matter from the bowel, especially if following some irregularity or error in diet, to jump at the conclusion that the case is one of simple diarrhea and prescribe accordingly, little thinking at the time that the case may be one of disease distinctly affecting the sigmoid and rectum. Formerly it was thought that dysentery was a constitutional disease; later investigators, however, have established conclusively that it is due to a local infection, and that the site of infection is nearly always found to be in the rectum or sigmoid flexure of the colon. Not to enter into a discussion of the subject of dysentery, it may not be amiss to mention in passing that under the older methods of treatment the mortality frequently ranged as high as 50 per cent. Need it be argued, then, that the true character of the disease be recognized at the earliest possible moment and the proper treatment instituted.

Of all rectal ailments anal fissure is ordinarily thought to be one of the simplest and easiest to cure, yet experience frequently proves it to be most unyielding. A possible reason may be found in that what may seem to be a simple fissure at the anal verge may prove to be a fissure plus a blind internal fistula, the only opening of which is found to be hidden in the fissure itself.

The accompanying illustration is one of a patient referred to me some two weeks ago, he having been treated in various ways locally for an "anal fissure," unusually painful and productive of a number of reflex symptoms, covering a period of nearly three years. Under persistent treatment by local applications continued for several weeks at a time the fissure would apparently heal almost completely, only to break open again in a short time after the treatment was discontinued; the reflex symptoms, however, never disappearing. After several repetitions of this kind it was finally decided by his physician to adopt a more radical procedure and divulse the sphincter completely under chloroform and curette out the fissure, confidently hoping that a complete cure would then follow. However,

it did not, and the reason can now be plainly seen. This also brings out the point that whenever a fissure is sufficiently deep or its edges sufficiently indurated to make necessary an operation under anesthesia it should not be considered good surgery simply to divulse the sphincter and draw a knife through the base of the fissure, or divulse the sphincter only and and "scarify" the fissure, as is recommended by some, but rather to divulse and massage the sphincter well, and then, instead of *incising*, completely *excise* the fissure.



FIG. 1.—Anal Fissure, complicated by blind internal fistula.  
One week after operation.

After this is done let the sides of the wound be spread apart and the base carefully examined for any evidence of further disease of tissue, which, if found, should likewise be excised. Should the opening of a fistula be found, the tract, together with its branches, should be followed up and eradicated, as would be done in any other fistula. Manifestly, the sooner such a condition is recognized and

attended to the sooner is stopped the further destruction of tissue, and clearly no fissure or irritable ulcer on the sphincter can be made to heal as long as it furnishes the only outlet to a fistula, more or less complicated. In the case referred to a small fistulous opening was revealed as soon as the diseased tissue at first appearing was cut away; this tract led backward almost to the tip of the coccyx, and extending from it laterally were a number of branches, the whole necessitating the removal of the amount of tissue indicated in the picture.

We are in the habit of promising perfect and permanent cure to anyone suffering from piles; yet who does not know of cases following either of the recognized operations in which the cure was neither perfect nor permanent, perhaps even no relief whatever having followed the operation. That this is a fact no one familiar with existing conditions will deny; that there is absolutely no excuse for it is equally true. Upon investigation the trouble is found to be, *first*, an incorrect or incomplete (other complicating rectal disease not being recognized) diagnosis; *second*, lack of precision and attention to details at the time of the operation; *third*, careless or negligent post-operative treatment.

It is hardly an exaggeration to say that ninety-nine out of a hundred of the laity assume that all ano-rectal troubles are hemorrhoidal in character, and it is not uncommon, indeed, for them to approach the doctor with a diagnosis ready-made and to preface a description of the case in question with, "Doctor, I have the piles." Does the doctor, then, accept the diagnosis with but a superficial examination, or perhaps no examination at all, what other than failure need he expect. There are comparatively few cases of hemorrhoids pure and simple; that is, absolutely uncomplicated by other local disease, of a different nature, perhaps, but requiring attention at the same time if a perfect result is to be anticipated. For example, suppose a patient with large, protruding piles, that are ulcerated and very painful, is operated upon and the operation, so far as the piles are concerned, is done carefully and cor-

rectly, but a co-existing rectal polyp is overlooked and allowed to remain, how can the anal wound heal properly or the final result be satisfactory? A rectal polyp, being attached to the bowel wall usually much higher than internal hemorrhoids are found, is capable, by means of its long pedicle, of being pushed about in the pouch of the rectum, to either side, downward or upward, and because

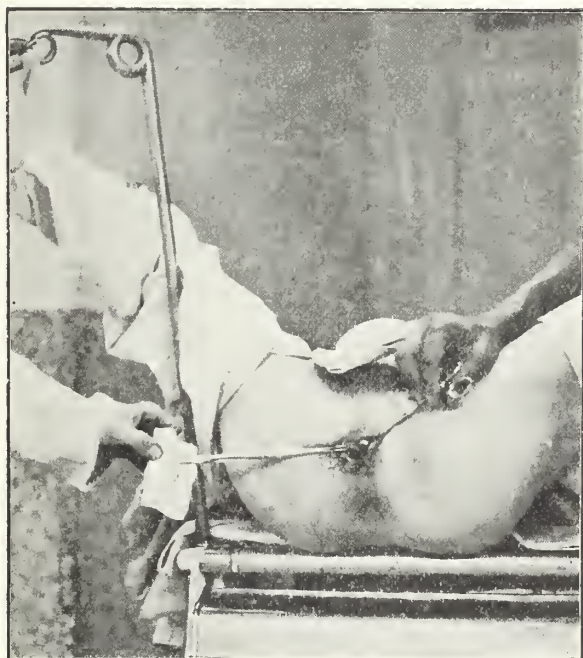


FIG. II.—Hemorrhoids and Rectal Polyp—Body of polyp is held by upper forcep; depression under small hemorrhoid, held by lower forceps, is the ulceration caused by the polyp.

of this fact may be overlooked unless special care is taken in each case. The pedicle of a rectal polyp, being drawn upon and stretched each time fecal matter passes through the rectum, gradually becomes elongated to such an extent that the hard body of the polyp can be grasped by the sphincter muscle. Because of friction, this soon leads to ulceration either of the hemorrhoids surrounding the polyp or, more frequently, to a deep ulceration between two of the hemorrhoids. If this ulceration, the base and edges of which are always indurated and lined by unhealthy

granulation tissue, is left unattended to at the time of the operation for hemorrhoids, difficulty will be experienced and a much longer time required to bring about healing of the rectal wound. If the polyp has been allowed to remain it is repeatedly grasped by the sphincter, the wound is kept from healing, the sphincter becomes exceedingly irritable, the patient suffers more than before, and, in a word, the operation is not a success.

Precision and the utmost care as to details at the time of the operation are of the greatest importance. Even though the diagnosis be complete and correct, and the operation, in the main, be correctly performed, if there is a lack of attention to certain points, the ultimate result cannot be satisfactory. If, for instance, the operation by ligature be the one selected, let it be taken for granted that, in the complete divulsion of the sphincter, the first step in the operation, it be gradually and carefully *stretched*, not *torn*, as is sometimes done, with a heavy or improperly constructed speculum. This divulsion can, in nearly all cases, be best and most safely done with the fingers.

The cut around the base of the hemorrhoid and the tying of the ligature should be done in such a way that all that is hemorrhoidal, and nothing more, be removed. Should each ligature be tied too high up in the bowel, thus unnecessarily taking away healthy tissue, a stricture would very probably follow. On the other hand, if the ties are not made sufficiently high to include all that is hemorrhoidal, a portion of the diseased structure being allowed to remain, the result is incomplete, and in the course of time the disease will recur to its full extent.

The cuts through the integument and underlying structures at the base of the hemorrhoids should be made in such a way that the resulting scar will not be circular in form, for if it is the contraction that takes place during the healing process will inevitably produce a contracted anus. This can be avoided easily by making each successive cut V-shaped, the base being toward the bowel, the apex pointing outward. In this way the resulting scars



radiate from the anus, and much of the tendency toward contraction is overcome.

The pain with which the employment of the ligature has been credited can be prevented almost entirely by making the cut around the base of the hemorrhoid deeper than was formerly recommended. The only purpose of the ligature in the so-called "ligature operation" is to control the hemorrhage. Now, since the large vessels that require ligation are always found just under the mucous membrane, it is obviously unnecessary to constrict with the ligature a great deal of other tissue, with its nerves, as is done when simply a groove through the skin is cut around the base of the hemorrhoid and the ligature placed in it, drawn tight and tied within the bowel above the upper surface of the hemorrhoid. Indeed, very little more than the large vessels and the mucous membrane need be included in the ligature, and when the operation is done in this way there is very little if any post-operative pain. Another essential is to see that all cuts are smooth and clean. If any ragged edges or overlapping tags of skin are allowed to remain they will become swollen and painful, and eventually become hypertrophied, thus causing the patient unnecessary annoyance and discomfort.

The work of the doctor is not completed, nor does his responsibility cease, with the completion of the operation. Much depends upon the after-treatment. Because of the location of the wound great care must be taken that it be kept clean and that infection be prevented, for should the latter occur it would likely result in a deep-seated ischio-rectal or pelvi-rectal abscess, thus complicating and unduly prolonging the period necessary for recovery.

In from ten days to two weeks following the removal of hemorrhoids an examination of the anus should be made to determine whether any adhesion of apposed raw surfaces has taken place. If such adhesions are found they should be gently separated in order that there may be no tendency toward contraction of the anus from that source.

It is surprising that many people of all classes seem

strangely imbued with the idea that rectal diseases are incurable, or at most only partially curable. That this is a prevailing idea is proven by the great numbers of pile ointments, suppositories, etc., on the market and the ready sale they receive at the hands of the public. Probably responsible for this belief becoming current is the fact that only a few decades ago doctors almost invariably advised against all radical treatment, urging *palliation only*. Fortunately, this old-time view is rapidly being displaced, and when the rank and file of the profession fully realize the fact that piles and most other ano-rectal ailments, not malignant, are curable "perfectly and permanently," and by a method of treatment that is safe, the laity will not be long in learning that they need not spend dollar after dollar for patented "pile cures" that do not cure; also that the great suffering they have borne, perhaps for years, need not be endured, for it can be cured.

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### THE EXAMINER IN LIFE INSURANCE.\*

BY JAS. W. GUEST, M. D.,

LOUISVILLE, KY.

IN my opinion, the great battle that life insurance companies have to fight is to get a proper urinary analysis as well as a proper *physical* examination from their great army of Examiners.

This army of Insurance Examiners is divided into several ranks, namely: (1) The Truly Honest Examiner; (2) The Indifferent, the Careless, and the Lazy Examiner; (3) The Overworked Examiner; (4) The Mercenary Examiner; (5) The Dishonest Examiner.

There might be a few more subdivisions made, but these will answer for the present.

(1) *The Truly Honest Examiner*.—This good soldier, as it were, of "The Honor Brigade," that always gives his best effort, his best mind and his best *conscience* to the cause he represents. The Examiner that actually

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\*Read before the Louisville Medical and Surgical Society, May 20, 1907.

makes a complete and competent examination in every case, and intelligently and correctly reports it. The Examiner who has at heart the true perception of his obligation to his company as its chief representative, and who feels the responsibility of his appointment; willing to aid his company in all honorable endeavors to secure and hold its business; willing at all hours to lend a helping hand to the uneasy agent in dispatching his work at the earliest possible moment; willing *only* to acquit himself in the most honorable and most gentlemanly manner on all occasions.

Through such good and conscientious work of the medical department, insurance companies are built upon an even more substantial rock than that of Gibraltar.

If all Examiners were of such material and such honesty, what a blessing and gain it would be to all insurance companies, and what a God-send to all medical directors.

I am sure all companies would willingly adopt the standard fee of five dollars (\$5.00) for every examination if all Examiners belonged to this subdivision—the Truly Honest Examiner.

(2) *The Indifferent, the Careless, and the Lazy Examiner.*—Honest and capable he may be as the proverbial day is long; has accepted his commission as Examiner because “there is easy and ready money in sight and not much trouble.” He says, “I will only devote my leisure hours to the work and not let it in any way interfere with my practice.” When in a pinch and a great hurry he will curtail the most important detail, and take for granted far too much. The work is hurriedly and indifferently done, and the insurance company receives the brunt of his injustice to it.

How often is the urine held up for ocular inspection and pronounced all right because it *looks* all right. *He* says, “It *is* all right, for nothing could be the matter with Tom Jones’ kidneys, who has never been sick a day in his life—specific gravity 1020, no albumen, no sugar—I will examine it later when I get time.”

Now, the Examiner was honest in that so-called urinary analysis, in a way of his own reckoning for honesty, for he felt absolutely sure that nothing could be the matter with his neighbor and friend, whom he had known intimately for twenty years.

Recently three examinations came to the Home Office of the Commonwealth from a new Examiner with every detail practically the same in the physical examinations. We wrote him, calling attention to this fact, and asked if it was a coincidence or a mistake. His reply was, "That he was not accustomed to making insurance examinations, and really had not done so in these cases in its true sense, but that all three applicants were his friends and neighbors, and *he* thought deserved life insurance, and therefore he recorded all three "normal in every particular so that they would be sure to get it."

That Examiner was just as honest in his work as the other one, only a more pronounced type of the indifferent, careless, lazy or ignorant Examiner.

None of this class of Examiners *mean* to do wrong, and never once realize the enormity of their offense to the company.

This skimming over, as it were, and taking too much for granted by these careless and indifferent Examiners, I have no doubt, has cost insurance companies the world over millions of dollars that could have been saved by careful and painstaking work.

I once saw an Examiner make a so-called examination of a fellow physician. His pulse, his measurements, his urinalysis, his entire physical examination were guessed at with the aid of the applicant.

That Examiner was *also* honest, I have no doubt, in his way of thinking, but because the applicant was a physician and had never been rejected, he was treating him with professional courtesy.

I am sure he never realized the gross injustice he was doing the company. I am *also* sure he never thought the five dollars he collected for this questionable work was not honestly earned.

So it becomes an essential, with this indifferent, careless and lazy class of Examiners, to as closely watch their work as those you have but little confidence in. A most serious fault with many Examiners, and a hard proposition for a company to deal with. Often good insurable risks are taken from you by other companies because of this fault of your Examiner. This class of Examiners is not entitled to the standard fee; in fact, is well paid by a graded fee.

(3) *The Overworked Examiner.*—The Examiner who not only has his large practice of general medicine and surgery, but eight or ten insurance companies, to say nothing of his lodge and fraternal work.

Necessarily, his examinations must be hurried ones, and the question is, are they correct ones? If as hurried as presumed here, is his work skimmed over like the Indifferent Examiner, as mentioned, and does it need the same amount of watching from the Home Office?

I once followed an Overworked Examiner in an examination for a large-sized policy. Upon coming to the physical part of the examination I asked the applicant to please remove his coat and vest. He was apparently indignant, and said "he would not submit to such red tape." Stated "that he had just been examined by another physician representing one of the biggest insurance companies in the world, and that he had not been requested to remove even his overcoat, which he had on at the time." I pointed out to him on the blank where the chest and abdominal measurements *must* be taken under the vest.

For diplomacy sake I said I was afraid to examine him through so much clothing for his own safety, for often applicants are rejected outright by the examining physician hearing the creaking of the out-clothing and mistaking it for heart or lung trouble. After he removed his coat and vest I detected very easily a large mitral murmur. He was apparently in perfect health and no reason to suspect a diseased condition.

If his statement was true of the first Examiner, did he



have a right to hurry through because the applicant was the picture of health, and it looked useless to go into a detailed examination?

This point brings up the question of how much time should a proper examination take, or at least what is the minimum time an Examiner should be satisfied with in the average examination? This class is also not entitled to the standard fee except when he can give proper time and his best judgment to the examination.

(4) *The Mercenary Examiner*.—Granting that he is perfectly honest and straight in his work, yet a source of great concern to his company. Unmindful of everything else in his examinations but his fee. Willing to work, willing to brave hardships and great inconveniences to get the examinations, and willing in the end to accept a part of the agent's commission.

Only last week an agent for a foreign company said to me, "I recently took an Examiner on a week's journey across the country with me. We wrote and examined fifteen applicants for policies amounting to many thousand dollars."

I asked him how he could get a practicing physician to make such a trip, suspecting that something was wrong. He answered that "Doc" was *well* paid for his trip, for my company pays five dollars for every examination, and besides he charged me 10 per cent. of my commissions. He said all fifteen passed satisfactory examinations, and the policies were issued.

Gentlemen, this Examiner might be the paragon of virtue, innocence and honesty, but certainly born or reared with a false conception of right and wrong. He might have justly passed all fifteen, or perhaps he would have rejected some had he found them unsound. But his love for money was greater than his intuitive honesty. His love for money, like morphia in appendicitis, masked all symptoms, and blinded him to every honest thought he may have otherwise had of these particular applicants.

What a pity that one of our profession, loved and honored by all classes of people, could not see the great

wrong he was doing, *not to himself*, but to his profession and his company. This class most assuredly is not entitled to the standard fee. In fact, the graded fee is too good for this sub-division.

(5) *The Dishonest Examiner*.—The crooked agent's right hand bower when hearts are indeed trumps and a few hundred shekels of silver are badly needed to jingle in his pockets. The Examiner that has no sense of the responsibility in passing uninsurable risks upon his company, or any care for what it may cost in its death claims. His sole idea is to favor the agent and pass all his cases through, so that he may continue to receive *all* his work. The Examiner who will take a part of the commission because he put an applicant through for the agent with a heart or kidney lesion. "The company," he says, "can better afford to take the risk than we can do without the commission."

The Examiner who never makes a urinalysis, but reports them all as normal; the Examiner that never takes, or indifferently takes, the pulse rate and reports it normal; the Examiner that never reports an unsound lung, although he has examined applicants galore coughing their throats red and profusely secreting heavy mucus from the nostrils, or unsound otherwise, and always believing the condition will clear up.

The Examiner who has found albumen or sugar, but believes it *transient* and no use reporting. The Examiner that will take the company's five dollars given for honest work, and gives in return dishonest opinions which he knows will cost his company thousand of dollars. This sub-division of the Examiner is the greatest affliction a company can possibly have, and it is worth thousands of dollars to any company to get rid of him at the earliest possible moment, and yet often he is the one to clamor loudest for a big fee and claim how poorly he is paid for his services.

Such men have no right to examine for *any* company. Such men have no right in the medical profession, but we

all know we have a few of them among us, and what are we going to do with them?

#### DISCUSSION.

DR. BARBOUR : I certainly enjoyed very much the resume by the physician that Dr. Guest had given us. To those of us who have not done much work in life insurance it is perhaps hard to appreciate how important the work is. I have never felt that the majority of the doctors of this country are able to do first class work, or have tried to be able.

When it comes to the question of medical life insurance work it is different from that met in every day practice. It is easy to examine a man for pneumonia and find out whether he has it or not, it is easy if a man comes thinking he has tuberculosis to find out whether he has it or not, but the men who come for life insurance examination think they are well, and try to keep you from finding out whether there is anything the matter with them. In general practice the patient draws your attention to this, and he gives you much information of value. In life insurance work the applicants do not want disease found out and throw obstacles in the way. So we must consider not only the present conditions, but we should find out whether there are any elements of any kind in family history of the applicant and then to size him up to find out the prospect of that man's living for the next twenty years. It takes a peculiar education to make a life insurance examiner. Any of us can examine a man in bed and tell the outcome. It is hard to examine a man and find out what his condition will be in ten, fifteen or twenty years.

Since I became a member of the Louisville Medical Examiners Association there have been so many practical points brought out in the experience of the other men in the Association that it has been a post-graduate school to me, and I have learned many things about life insurance examination that it would have taken years to have found out by myself. Of course when a man is capable, honest and understands his business he is worth a great deal to the company, and five dollars is a very small fee for the examination where the amount of the insurance is large ; for the generality of men I think five dollars is a fair fee. For the dishonest, incapable and lazy examiner it is too large a fee.

I am glad that Dr. Guest brought this subject before the Society to think about because the question of fees for examina-

tion work is engaging the public mind considerably now, and it is well for us to consider it occasionally.

DR. TAYLOR: I would say that the paper is a most excellent one. I have been an examiner for life insurance companies about the same length of time as Dr. Barbour, and the insurance companies are not entirely free from blame for the many mistakes that are made by examiners. I do not believe with the exception of three or four companies represented in Louisville to-day but that the agent will take any doctor regardless of his standing in the profession, or otherwise, and make him an examiner provided he will take a policy. The agent will get an examiner for the company and agree to put the bulk of his examinations in his hands. He will get inexperienced men that Dr. Guest as medical director would not select himself. His company may not do it but there are other companies that will do it. There are a few companies that rate their applicants as first, second and third.

Now, as to the matter of examining an applicant if the examiner is qualified to make a physical examination, and make a chemical urinalysis he certainly should do his duty in that respect. The insurance company gives him no latitude except in one question, and that question is whether or not the applicant is a good risk.

Some of the companies give you a secret code as to the rejection of an applicant, so that you do not have to write in such a way that the agent can tell whether you rejected him or not. A capable physician making a careful examination can come close to telling the present condition of the patient. The card that the examiner fills out after examining the man is the knowledge that the medical director uses in declining the applicant. Very few of the applicants that are examined and rejected are accepted by another company. The medical director does not as a rule allow the examiner to take any latitude. He does not ask about surroundings, probably asks the question whether there is tuberculosis in the same house, or whether the wife is a subject of tuberculosis.

The medical directors want capable men. A man capable of making a physical examination and a proper analysis of the urine and reporting it has done his duty. The medical director is the one supposed to decide the matter.

DR. SPIEDEL: There are a number of obstacles to making a rigid examination for life insurance. One is that when we make

a rigid examination and the applicant is not accepted, or you do not recommend him favorably, it follows that your life insurance examinations drop off. It seems to me that it would be worth while to watch a point of that kind.

Another point that has hapened to me is that when I have rejected an applicant he has been accepted by another company. I remember one case in which the man had a marked mitral murmur and had albumen in the urine. I was ridiculed by this man in a public place for rejecting him and was told that he had been accepted by another company. I know cases in which the pulse would intermit ten times a minute and the applicant was accepted by another company, and my examinations would drop off.

DR. WATHEN: I would like to ask one question, and that is, if competent medical examiners could not be secured by examinations somewhat similar to civil service examinations?

DR. DAVIDSON: I have read the statement that insurance companies could get along as well without examinations as with them. I would like to hear Dr. Guest's opinions on that point.

DR. BLACKFORD: Medical examination for life insurance, it strikes me is getting a picture of the applicant before the medical director in as few words as possible, especially his physical picture together with the family history. The medical director with his family history, together with the facts in as few words as can be expressed placed before him, has the data on which he basis the refusal or acceptance of the risk. The examiner in addition to his capability of making an examination in detecting heart murmurs and lesions of the thorax should possess tact to handle the applicant and make him feel that he is getting in the right company and will get the worth of his money. He should have this tact in order that he may get to examine those cases we run up against that refuse to let us make the first examinations. The way the examiner handles the applicant is a source of benefit to the company. This holds true in getting the second and third specimens of the urine even after the applicant tires and thinks he will drop his application.

It seems to me that in addition to making a careful physical examination of the applicant and getting his family history, the medical examiner should have tact in handling the applicant.

DR. IRELAND: Dr. Barbour brought out the point of the difficulty of making a proper physical examination. When our patient comes to us we can at once eliminate a great many



things, but when it comes to making a physical examination of an applicant for life insurance we can eliminate very few things. We must go over the entire body and note everything that exists. To do that it requires a good deal of time; especially is this true of an examination of the chest in order to detect incipient tuberculosis. And as a rule it is incipient tuberculosis that we will have to look for, because applicants in the advanced stages of tuberculosis will not present themselves. And as I say, it is a difficult thing to detect incipient tuberculosis by physical examination.

In my opinion as I have tried to bring out recently in a paper before the Medical Examiners Society, it is to no little extent the fault of the company that so many cases of incipient tuberculosis are overlooked and consequently accepted. It is the fault of the company that they require the examiner to go to the place of business of a great many of the applicants where a proper physical examination is entirely out of the question, as we certainly cannot make a good physical examination unless the patient is stripped and there is an absence of noise. Statistics prove that there are very few cases of incipient tuberculosis diagnosed as such in applicants for insurance. If that condition could be changed or altered so that the applicant would be compelled to apply to a physician at his office for examination where proper examination could be made, a great many of those cases of incipient tuberculosis could be diagnosed.

DR. HEFLIN: I am sorry that I did not have the pleasure and privilege of hearing Dr. Guest's paper. We all know that the family physician and the medical examiner are placed at two extremes. When the patient comes to the family physician he magnifies his trouble. When the applicant goes to the medical examiner he minimizes his trouble.

I only arose to speak of one thing, and that is the examination of the urine. As Dr. Taylor said, the examination of the urine is the point of great importance. In some of the blanks you are required to state that the urine is from the applicant. Recently, within the last six weeks or two months, I know of two of my patients that have gotten life insurance. They had marked disease of the kidneys which could be detected by the slightest examination of the urine, and they passed the examination by getting the urine from another patient. They did not give their own urine. Both told me that they passed their examination for this company. They went into another room, and

a friend there passed the water, and they brought it back and gave it to the doctor. One company required that the urine be passed in the presence of the examiner. Many companies do not ask whether the specimen is passed in the presence of the examiner or not. I do not know how often this occurs. These two patients came under my observation, and this brings this point to my mind. One of these applicants told me that he had heard of a friend who did this. He was examined by Dr. Guest's company, and he is trying for another.

DR. WILSON: I think most of the gentlemen present who have discussed the paper have all been examiners for life insurance companies, and I do not think that it will be improper for one who is not an examiner to give his views from the other side. Probably the best illustration I received of the manner in which the examinations are made was when I made application for a policy for life insurance, and the examiner called at my office, and I was put under a very cursory examination. If I remember correctly, I did not take off my coat or vest. Furthermore, I question very seriously whether any man can make a diagnosis of an incipient chest condition without the man being stripped to the waist. It took the examiner five or ten minutes to ask all the questions that the company thought necessary. The examiner then called up his office to find out whether he had calls anywhere else.

Another thing that struck me from the point of view of a citizen is that the mortality statistics of life insurance companies are gotten out along the line of general percentages of deaths, not only in insurance fields, but everywhere, and the premiums are placed at such a point that the company cannot lose. I think that has been proven to be the case. If not, the big insurance companies throughout the world would not have been able to pay their President thousands of dollars a year as a salary. A certain number out of every hundred die at a certain age, and the other ninety-nine pay the difference. If a hundred men in Louisville get together and paid a hundred dollars a year they would be able to pay the life insurance off. Insurance companies can pay the same way.

In Germany and throughout Europe they are realizing that it is cheaper to take care of their people, and they are erecting large sanatoria. They have spent something like three million dollars in sanatoria. Workingmen and everybody must be insured, and the companies find it cheaper to look after these cases

in the sanatoria than to pay death claims. I think the \$5.00 fee is worth while. The honest and conscientious examiner earns more than \$5.00. The way I have been examined I know of two or three pretty good men who would be "tickled to death" to get \$3.00 for looking over a man like they looked me over.

DR. MEYERS: The medical director of life insurance companies can do a great deal toward establishing a good grade of examiners. I believe one great fault is that in every city of consequence there are too many examiners. I know in my experience in the Citizens Life I did not care whether I got any more or not. I have been asked to examine for another company in which there are one or two examiners. I think I have made \$25.00 in six months.

I saw one application blank that appealed to me very much. It required the examiner to register the temperature of the patient at the time of the examination. Another is to count the pulse of the patient in different positions. Another question or several questions referred to tuberculosis; that is, whether or not the applicant applying for life insurance is in any danger of being infected; that is, being susceptible to infection.

The medical director can make or break the company. It would be better if there were fewer examiners for the company. There is not enough money in it for anybody.

DR. WITHERSPOON: I am much obliged to you, gentlemen. Dr. Guest has about expressed my opinion. I do not feel like making a speech to-night, and shall ask you to excuse me.

DR. GUEST (*closing*): I am much gratified to have the paper so liberally discussed, and I agree with Dr. Barbour that a great many physicians do not deserve any fee at all for their examinations. Dr. Taylor has struck the keynote in life insurance when he spoke of capable and honest examiners. Very frequently an examiner will find a trace of sugar or albumen in the urine, and we examine the same specimen at the Home Office, and call the attention of the doctor to the fact that we do not find it. We get a second and a third specimen, and if we find that the doctor was mistaken about it we issue the policy. We have accepted several risks like that. I had a case not long ago of a man rejected by the examiner, and the only thing apparently wrong we could see was that the applicant was twenty pounds over weight. He replied that his brothers were all large, and that his father also was large, and that it was a family characteristic. We accepted the applicant.

In regard to Dr. Speidel speaking of his examinations dropping off when he rejected an applicant, that is true where the company has many examiners and leaves it with the agent to select any one of them. We have two in cities of any size, a chief examiner and an assistant. We try to have the chief do all the work; the assistant only does the work when the chief cannot be gotten.

In regard to Dr. Wathen's suggestion that the examiners be appointed, somewhat after the manner of civil service appointees, I believe it will be impossible to do that, for the reason that we find in covering the entire State for examiners a great many of the busy doctors have not answered the application blanks sent them. If you ask them to go to a little additional trouble, the busy ones will not do it, or at least delay it too long.

Dr. Davidson spoke of seeing, some months ago, in print where the company would succeed just as well without employing an examiner as employing one. I do not believe that would be possible in ordinary life insurance. I know of one company (an industrial company) where they have eliminated all examiners for children up to two or three years of age. They claim that they have saved a great deal of money. That is in early life, though.

Dr. Blackford mentioned a good point when he spoke of tact. This is necessary especially in getting a second or third specimen of urine, or in re-examining the second or third time. I think as Dr. Ireland said if we could make an examination in our office it would be better. Going around in stores and factories we have too much noise to be absolutely accurate. Many of them will come to your office, but the agent will oftentimes force the examiner to go to the applicants place of business fearing rival agents may see him.

Dr. Heflin spoke of substituting urine. That, of course, is a difficult thing to control if the examiner is dishonest; then, of course, we expect it. I differ from the doctor and think most of the blanks I have ever seen ask the question whether or not the specimen was passed in the presence of the examiner.

Dr. Wilson spoke of the cursory examination that was made in a few instances. I do not believe that heart lesions or lung lesions can be detected through a coat or vest without they are of old standing and unusually loud. An applicant should be stripped to the waist or at least his coat and vest be removed. Since the negligé shirt has become so popular in the last few

years it does away with the necessity of removing the shirt. It is only occasionally that we run across a stiffly-ironed white bosomed shirt, and when I do I use a little diplomacy and ask the applicant to remove it, for fear I might do him an injustice. I have never had but one refuse and he had a large mitral murmur.

Dr. Meyers spoke of taking the temperature and pulse. So few thermometers are absolutely accurate, however, and a little temperature of ninety-nine might mean nothing at all. If the patient had a temperature of 101 or 102 degrees, that, of course, would mean something and call for a postponement. I do not believe a little temperature means anything alone, so I do not agree with him on fractions of temperature. With regard to the pulse. We know that the pulse varies from six to twelve beats according to the man's position and his consciousness of being examined. I think as nearly normal position as we can get is the proper one.

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## THE DESCRIPTION OF A MAGNET FOR REMOVING STEEL FROM THE EYE.

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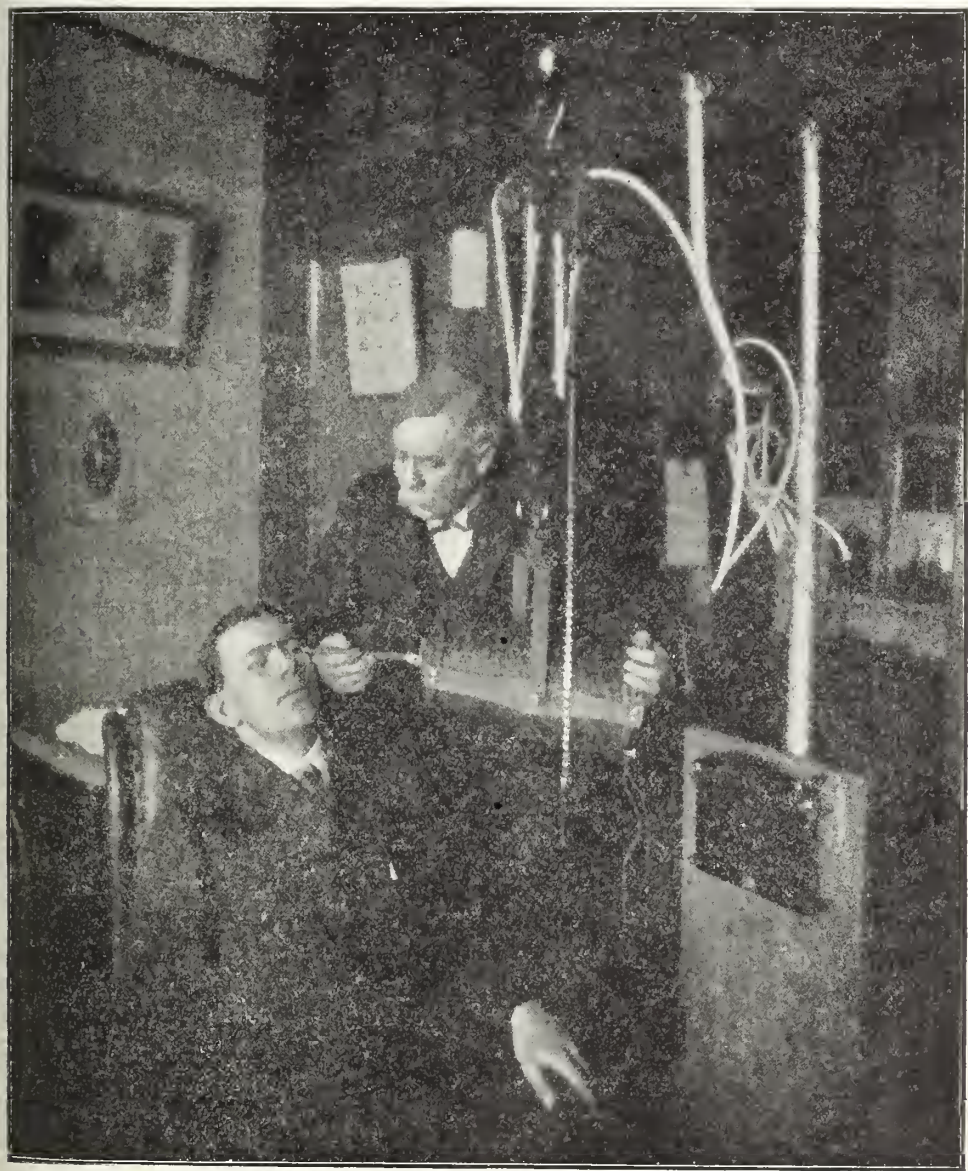
A SOFT iron core three inches in diameter and fifteen inches long, turned down at each end until a nipple one and one-half inches long and one inch in diameter was formed. A screw thread was cut on each of these nipples, then a hole half an inch in diameter was drilled into each of these nipples the full depth of the nipple and a small set screw so arranged as to retain any electrode that might be desired to be placed in the hole. The object of this thread being cut on these nipples is for the purpose of receiving any soft piece of iron that might be desired to be used as an attachment to the magnet as an elec-



trode. The two rubber flanges which go to make up the head of the spool are eight inches in diameter and three-eighths of an inch thick, with a hole drilled in the center of each so as to fit snugly around the nipple at either end, and firmly up against the collar which was formed by turning down the nipple.

This coil is adjusted in a brass frame composed of brass bars one-quarter of an inch thick and two and one-half inches in diameter in the middle, tapering down to one and one-half inches at the end of the bars. Each of the two end bars have a nipple with insulation. These two end bars have four quarter-inch screws with sextagonal heads. Two of these screws pass through the brass and rubber spool head into the soft iron core sufficiently to securely fasten the spool head and the brass end piece to the core. The other two screws simply pass through the brass and not quite through the rubber. Each of the side brass pieces reaching from one end of the spool to the other has two holes at either end to carry the screws by which the end pieces of the brass and the side pieces of the brass frame are firmly screwed together. These side pieces have a nipple one-half inch in diameter firmly screwed into the center of each, and to these is attached an iron loop nine inches high and eight and one-half inches in diameter. At the lower end of this loop on either side is a hole which fits over the brass nipple mentioned above, and in the center of this loop is screwed an iron ring. With this arrangement the coil may be readily attached to a hoist, an ordinary block and tackle arrangement which is attached substantially to a table on rollers, and in this way may be handled with perfect ease, and the finest adjustment may be obtained with the least amount of difficulty with the patient in either a recumbent, sitting or standing position.

This coil is wound with No. 14 silk-covered copper wire in two sections. The inside section is 12 6-10 ohms resistance, while the two combined are 18 6-10 ohms resistance. This coil is energized by 110-volt current direct. The current is passed through the rheostat, and in that



way the smallest amount of current possible can be used in energizing the coil, and if the desired result is not obtained by using the inside portion of the coil with the full amount of current, additional power may be obtained by simply turning the current through the entire coil instead of the inside section.

An incandescent lamp is placed in the circuit which supplies the coil so as to enable the operator to know at all times whether or not the magnet is being energized.

The advantages of such a coil are manifest. It is a well-known fact that the smaller the piece of steel the more powerful must be the magnet to attract it, and just as the metal is increased in size just so much the power to attract it may be lessened. With a magnet that is as powerful as this one there is never any need of introducing an electrode into the wound for the purpose of pulling the metal out of the eyeball. It is certainly a very great advantage, inasmuch as it does away with the possibility of infecting the globe by the introduction of an electrode which may be septic in spite of all precautions that are taken. Another advantage over the smaller magnet is that the polarity of the piece of metal is overcome and they do not turn around, as they would be inclined to do with a weaker magnet. In short, it is a well-known fact that like poles resist each other; hence if the south pole of a weaker magnet is presented to the south pole of a piece of steel in the eye that piece of steel would be inclined to turn around, as it would be bound to do if it were suspended by a piece of thread or was lying on any smooth surface, and for that reason the steel would probably not be removed by the weaker magnet unless the sitting was prolonged a great length of time so as to give the steel a chance to turn around if it could, whereas if a strong magnet were used the polarity would be overcome and the steel would make straight for the magnet.

## CATARRHAL PNEUMONIA.\*

BY EWING MARSHALL M. D.,

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BEFORE taking up the study of the subject of this paper I would like to make a plea for the old name of capillary bronchitis.

Leave the name of pneumonia to be significant of a lesion where the lung tissue proper is inflamed.

About a hundred years ago, in his lectures, the great Thomas Watson said, when talking on this subject: "I have been speaking of acute bronchitis, uncombined with any other pulmonary disease, and it is curious how little disposed the inflammation often seems to be to extend itself from the mucous membrane to the neighboring tissues. The reason doubtless is that this membrane is furnished with a distinct set of blood-vessels, the bronchial arteries and veins, while the substance of the lung is supplied by the pulmonary."

The celebrated Andral, living at the beginning of the 19th century, observed a variety of acute peripneumonia which affected the individual air-cells or vesicles, and he termed it vesicular pneumonia. M.M. Rilliet and Barthez, living about the same time as Andral, said this condition was not limited to one vesicle only, but often extended over many, and they proposed the name of vesicular bronchitis.

Many of the earliest observers were confused by finding a serous fluid in the air-cells in the early stage of what they took to be a croupous pneumonia, and that death had occurred before consolidation, while, in my judgment, they were dealing with a catarrhal form of trouble.

When we agree to call a lesion of the lining of the bronchi and bronchicles "*bronchitis*," and we find this lesion extending into the finer tubes and the air-cells, then why not call it "Capillary Bronchitis?"

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\* Read before the Louisville Clinical Society.



In studying this trouble we find it naturally dividing itself into acute, sub-acute and chronic.

I have seen a goodly number of the acute variety and some of the sub-acute, but none that I can recall of the chronic.

The variety I wish to bring up for consideration to-night is the acute. I will not even attempt to write an exhaustive paper on the subject, but hope to elicit a broad discussion from most of the fellows, as it trenches on every department.

*Causes.*—It commonly grows out of or complicates sub-acute and chronic bronchitis as well as acute bronchitis, the class of exanthems, diphtheria, pertussis, and may complicate any wasting disorder, for marasmus is a strong predisposing cause to this trouble.

*Bacteriology.*—I believe Weichselbaum, Cornil and Neumann claim that the pneumococcus of Frankel cause primary broncho-pneumonia. Different bacilli have been found in secondary cases, but as to whether they bear a causative relation or not is debated.

Morbid anatomy of the lesion, as I understand it, is an inflammation of the lining of the smallest and ultimate air tubes and the vesicles. This side of the subject I will leave to those who have more experience in the laboratory departments than I have.

*Symptoms.*—I will not attempt to go into this branch in detail, as my experience has been with cases generally secondary to measles, pertussis or influenza, in all of which there was already more or less bronchitis. The symptom that always has first attracted my attention has been the rapid and labored breathing. Then I take note of the rapid pulse and the great restlessness. The respiration may be anywhere from fifty to one hundred and ten to the minute. The pulse is not always in keeping with it, as sometimes it is relatively not nearly so frequent. I have encountered a pulse of only one hundred and forty or fifty when the respiration was seventy or eighty.

The physical sign that has always been more or less significant with me has been the small moist rale that I



have always designated as sub-crepitant. This more or less distributed over the lower and back parts of the lung in the beginning, and in bad cases becoming more diffused and higher up.

Duration is variable, from a few days to weeks, and with a strong tendency to relapse, to have complications, and for death to occur when apparently convalescence has set in. Smith says, page 582: "In favorable cases, in from seven to ten days the heat and thirst decline, the pulse and respiration become less frequent, the cough looser, the features have a more placid and contented expression, the appetite returns, and the patient is again amused by play-things. The improvement is progressive, but gradual."

I see cases with an abrupt crisis, and rapid return from an apparently very grave condition, as the following report goes to show:

A little girl that was a year old the twelfth of this month, belonging to a well-to-do family, but that has had a struggle for its life, from its mother being unable to nurse it, and then when it was about three months old it had pertussis, from which it never has entirely recovered. On Tuesday, April 2nd, I found her with increased catarrhal symptoms, and apparently suffering with the prevailing lesion, "influenza." No great exacerbation occurred on Wednesday or Thursday, and I did not see her, as the family kept me in touch with her over the telephone. Friday midday they thought her worse, and I saw her late in the afternoon, but as we found she was cutting some teeth which were nearly through, and the temperature was just above a hundred and respiration was not labored, my attention was not called to the lungs, thinking the cough was the remains of the pertussis, and the irritability was due to a combination of the influenza and the eruption of the teeth. During Friday night the family justly became alarmed, and I saw her early Saturday morning.

Saturday morning the gravity of the case was recognized, as the respiration was about ninety and the pulse was about one hundred and fifty. In the afternoon the respiration was about one hundred and the pulse from

160 to 180, though pretty good quality. In the morning early over the lower half of the left lung posteriorly there was a diffused sub-crepitant rale, but with patches of normal sound. By late afternoon it had become more diffused. Sunday morning, about 6 A. M., practically the whole lower half of the left lung was filled with these small moist rales, and a few patches were found on the right side low down posteriorly. As the condition had become so serious, we began the inhalation of Walton's Oxygen Compound, a combination of oxygen and nitrogen mon-oxide, with apparently great benefit. I have used oxygen straight only a few times, and never saw any benefit from it. It was only upon earnest solicitation upon the part of the parents that I used it, and as they had ordered a cylinder and had it there, that I used it conditionally that if it annoyed the baby without any prompt benefit we would discontinue it. The first time it was used there was considerable struggle, due to fear, which temporarily embarrassed both the lungs and heart, but in a short time this passed away, and the child sank into a peaceful sleep; the pulse dropped below 150 and the respiration dropped to less than 70. The oxygen mixture was kept up every three hours, and with apparent benefit every time. Became very restless between Sunday night, midnight and morning, and I was consulted about 2.30 A. M. Then the respiration was about 70 and the pulse 140 as long as she was asleep, and until just before the time to inhale oxygen mixture. The trouble was evidently spreading, and the symptoms became more and more aggravated until I saw her at 6 A. M., when the cough had become very hard, and with that characteristic pertussis paroxysms, a waxy blue appearance of the face, crying, straining and biting of fingers. Pulse 160, respiration 80. The teeth were evidently aggravating the symptoms, which steadily became more ominous until just before I saw her again this Monday morning at 11 A. M., when she had had a most severe and protracted coughing spell. When I had seen her at 6 this morning there was very little, if any, air getting into the lower lobe of the left

lung, and there was considerable trouble in the right lung, but now, at 11 o'clock, there had been a great transformation, with which the nurse, Miss Leon, was duly impressed. Prior to and during the first part of this severe paroxysm the child seemed to her to be in a desperate way, but just before my arrival the paroxysm greatly subsided, and the symptoms were markedly improved. When I listened to the left lung air was again entering it quite freely. At first I was mystified, but on thought supposed as probable that the bronchi had been agglutinated, and that the severe coughing opened it up. Watson reports Andral and Laennec as saying that it occasionally happens that during the course of an attack of bronchitis we cease altogether to hear, in a certain extent of the lung, either the natural respiratory murmur, or any of the modifications of rhonchus, sibilus or crepitation, that have been mentioned; yet over this same portion of lung, in which no sound, healthy or morbid, is heard by the ear applied to the thorax, percussion gives the natural hollow sound. At the same time the patient becomes affected with urgent dyspnea. In such cases it generally happens that at the end of a strong fit of coughing, the effect of which is to expel, or at least to displace the tenacious plug of mucus obstructing the bronchus, the sound of respiration is re-established as suddenly as it had disappeared, and the dyspnea also ceases.

Such was not identically the same experience in my case, as the respiration and pulse gradually declined, but there was uninterrupted improvement from that moment, with a steady dissolving of the rales.

*Diagnosis.*—I base my diagnosis on finding marked dyspnea, rapid pulse and respiration, with the small moist rale which I was taught to call sub-crepitant, and I have seen no reason to change the name. These may be circumscribed or quite diffused, thus either blocking lobules or even a whole lobe.

*Treatment.*—Must be stimulating from the beginning and supporting to the maximum extent that the stomach and bowels will stand. I formally pinned my faith to the

triumvirate drugs: Strychnia, carbonate of ammonia and whiskey. But from now on I will place by their side, until I find cause to change my mind, this, to me, new oxygen mixture.

Systematic writers depend more on digitalis and musk than my experience has led me to do. Also they speak of sedatives like codeine when the cough is very harrassing, but I have always felt chary either about obtunding the bronchial sensibility or risking the interference with the secretions of the stomach or bowels.

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## DECUSSATION OF THE PYRAMIDS.

BY D. T. SMITH, M.D.,

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IT is a fact of curious interest that all the higher animals have a double brain and that each half of the brain furnishes to the opposite side of the body its nerve supply. The nerve fibers, or axons, of the motor nerves pass over to the opposite side, crossing each other in the medulla; this crossing being designated as the decussation of the pyramids.

The sensory axons also on reaching the spinal cord or the brain pass over to the opposite side at whatever point they enter these structures. As a result of this arrangement a very large proportion of brain injuries manifest themselves by producing paralysis and loss of feeling on the opposite side of the body.

The forces that have operated to produce the dual brain and the ends that have been subserved by this condition have elicited no notable effort at explanation; and still less have the cause or causes which have produced the decussation of the pyramids been the subject of attempted elucidation in the interest either of teleology or evolution.

The theory here proposed, or rather suggested, is by no means regarded as conclusive; but it is believed to meet the logic of the conditions to an extent sufficient to

justify its setting forth as being promisingly helpful to some more ingenious investigator who may have his mind directed to it.

The explanation the writer would offer is based on the advantage accruing to the individual from simultaneous and reciprocal relaxation and counteraction of opposing muscles. Although the principle, if true, must operate in very low forms of animal life; we may take the fish as a suitable illustrative example, owing to the comparative simplicity of its movements.

If we observe a fish as it moves in the water we find that it both directs and propels its body in very large measure by lateral movements of its tail. If it seeks to turn its head to the right it effects this by turning its tail to the right, and it turns its head to the left by turning its tail to the left. It propels itself by quickly moving its tail from right to left, or *vice versa*, while partially relaxing its extremity and the caudal fin in such a way as to cause the tail to glide on the water as on an inclined plane. It is evident that in all these movements contraction of the muscles on one side of the body is accompanied by simultaneous relaxations on the other; otherwise the opposing muscles would counteract each other, and the fish could neither turn nor advance.

“But how,” it may be asked, “does this bring about decussation?”

If it be assumed that the relaxing impulse and the contracting impulse are given off from different nerve cells, it would be clearly of advantage to have these cells placed as near as might be to each other, for in this way the least possible time would be lost in transmitting from one cell to the other the intelligence that a contraction or relaxation was about to take place.

If the contracting cell and the inhibiting or relaxing cell were placed on opposite sides of the brain, when the former got ready to act it would have to send notice to the latter and wait for an answer before it could act, and this would consume time.

Almost of necessity, then, the contracting and relaxing



cells must be placed on the same side of the brain and close together. And, furthermore, from two different stations or sets of stations contracting impulses must be sent to one side of the fish's body and relaxing impulses to the other.

One or the other set of axons, then, must cross over, while the other goes down on the same side. Which shall cross and which remain?

Physiologists tell us that the velocity of a nerve impulse varies with the length of the conducting nerve, being slower in long nerves than in short ones, and it increases with the strength of the stimulus or the magnitude of the impulse.

Without doubt a greater impulse is required for contraction than for relaxation; and, if so, the contracting impulse would travel the faster. Hence, in order that the faster traveling impulse shall reach its destination at the same instant as the slower relaxing impulse, the contracting nerve fibers, embracing about 90 per cent. of the total, must cross over to the opposite side, while the relaxing or inhibiting axons (about 10 per cent.) go out on the same side. This gives a slightly longer route for the stronger impulse to travel and enables the two impulses to reach the opposing muscles simultaneously.

It must be admitted that the difference in length of route of the crossed and direct tracts is not great—never more than the diameter of the cord—which in the lanceolet and like diminutive animals, where the structure first appears, must be very small indeed. But failure of opposing muscles to contract and relax synchronously, even in the smallest degree, must exert a marked influence on the process of evolution.

The crossing of the motor axons necessitated the crossing of the sensory axons, for it would be of distinct advantage to the individual to have the sensory cell in juxtaposition with the motor cell whose action it was to influence. Around the two motor centers thus installed side by side all requisite aggregations of accessory and subsidiary cells would be developed, resulting finally in the

evolution of a double brain, one part almost the exact counterpart of the other. This double brain in turn reacted upon the body until it came to appear to consist of two separate halves attached together.

In fishes and the lower classes of animals having no limbs the arrangement here indicated would be a fairly simple one, but in the higher animals it must become extremely complex, and its demonstration very difficult, if not impossible.

The great difference in the relative size of the brain in different animals may have resulted from difference in amount of tactile surface, or tactile organs. In this respect man easily leads the animal kingdom, and his vastly larger brain, in comparison with that of all other animals, may be the legitimate result of this more extensive tactile surface.

# THE American Practitioner and News.

“NEC TENUI PENNÂ.”

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F. W. SAMUEL, A. M., M. D.,	} EDITORS.	O. P. NUCKOLS, M. D., Ph. G.
SAMUEL B. HAYS, M. D.,		MANAGING EDITOR.

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## Editorial.

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*Our New Home.* It is always a delight to shake off the dust and accumulations of years in the old antiquated home, and move into new, fresh, clean quarters. Such has been the recent experience of the AMERICAN PRACTITIONER AND NEWS. We have just removed our offices from 731 Fourth avenue to the Ather-ton Building, Suite 242, where we will always be glad to meet our friends and subscribers. The “latch string” swings on the outside, and we extend to all a hearty Kentucky welcome, whether on business or to pay us a friendly call. Moving, however, is not without its unpleasant side, and we are forced to apologize for any shortcomings of the journal for this issue on account of the disorganized condition caused thereby. We hope, however, in a few days to assume the even tenor of our way, and enter upon the work with renewed vigor, and with a determination to give our patrons the very cream of medical literature. Our working force has just been thoroughly reorganized, and our staff of co-laborers are all men of ability in their respective lines of work, and we expect to make the AMERICAN PRACTITIONER AND NEWS second to none.

*Lest We Forget.* The writer of an editorial may be charged with resorting to worn out truisms when he insists that professional men are too prone to forget the fundamentals of their respective profession; that when they do so they are in danger of becoming empiricists or even refined quacks. And yet we shall indulge even in a more pronounced truism enough to say that the real masters in surgery and medicine consciously or sub-consciously make use of these fundamentals in the routine of their daily work.

It is a deplorable fact that a large percentage of medical men now engaged in active practice rarely, if ever, refer to or think of, or even apply what they once learned in physics, chemistry and physiology as preparatory to the practice of their art. Moreover, a still higher percentage are indifferent to the advances that have been made in these sciences in the years since they were in high school, academy, college or university. This is especially true of chemistry, and we confidently believe that much of the gross ignorance shown by some of our *strongest* men, their use of drugs and their compounds, in their resort to an extensive use of proprietary preparations, is largely due to this ignorance.

We are aware that we shall be met with the old saw that no physician in these days of specialties can be expected to be an expert chemist. We grant this, but we still insist that no live student of medicine can afford to be ignorant of the recent work in thermo-chemistry, in the theory of solutions, ionic equilibrium, osmotic pressure and electromotive chemistry. Much of the very elements of physiological action is dependent on a knowledge of these subjects, and yet how many of us know anything about them?

It is the tendency of the "plain" doctor to shy at these "theories" and "terms" with the feeling that a comprehension of what they are is beyond his ability or time to unravel. This is not true, for by consistent reading any intelligent physician can easily keep abreast of what the research man may spend his months and years in acquir-

ing. Throughout the whole range of his use of *Materia Medica*, knowingly or unknowingly, the doctor is dealing with the chemical behavior of ionic substances and phenomena of solutions which it is absolutely necessary that he should know. We might elaborate on such a theme indefinitely; and while this is not within our province or our desire, yet we feel that the time is coming when we shall be forced to the truth of the necessity of a more consistent application to rational medicine.

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## Recent Progress in Medical Science.

IN CHARGE OF

SAMUEL BROWN HAYS, M. D.,

LOUISVILLE, KY.

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J. M. FRENCH, (*Merck's Archives*, Feb. 1906), writes an interesting paper on the Mydriatic Alkaloids and relevant to the comparative chemical identity appends the following note:

"The question as to the identity of scopolamine and hyoscyne has not apparently been fully settled. While the United States Pharmacopœia states the two to be chemically identical, and, following this, they are so regarded by most recent writers, nevertheless there exist in the minds of some of the most accurate observers grave doubts as to the physiological identity of these alkaloids, inasmuch as hyoscyne does not seem to produce general anesthesia, whereas a good grade of scopolamine does. Recent investigations go to show that only a strongly levorotatory scopolamine is capable of producing anesthesia. For example, the highest grades of scopolamine have an optical rotation of  $-20^{\circ}$  and these are found to be exceedingly effective in combination with morphine in producing general anesthesia; whereas, on the other hand, there are scopolamines on the market which have an optical rotation as low as  $-2^{\circ}$  and these are found to be almost totally inactive.

"Whether these differences have anything to do with the contradictory results and opinions as to the dangers of this method of producing anesthesia is a question worthy of consideration."



Many Ophthalmologists have employed chemists to determine some chemical difference to explain why scopolamine, hyoscyamine and atropine, have a difference in their physiological action on the ciliary region. Why Japanese belladonna and our common "deadly night shade" have a different action therapeutically and yet the former releases its grasp on accommodation in four to five days and atropine holds on for 10 to 14 days. Also, why does scopolamine, comparatively never cause increase of intraocular tension where atropine has sufficient tendency in that direction to cause its administrator to proceed with care. Adhesions of iris to lens as well as the usual iritic, sluggishness, respond to scopolamine or hyoscyamine more rapidly and readily than atropine. We therefore can not lay the difference in action to the difference in chemical identity.

WILBER B. MARPLE, (*Med. Record*, Mar. 16, '07), in speaking of the various ophthalmoscopic signs of arteriosclerosis, says that there may be a general change in the size of the arteries and veins of the eye-ground. There may be changes in the color of the arteries. There may be changes in the caliber of the vessels at different points. This is the most characteristic phenomenon. Angiosclerosis is not found exclusively in elderly people. Healthy looking retinal vessels are often noted in persons seventy or eighty years of age. There may be very pronounced vascular changes in both arteries and veins without any evidence of functional disturbances or defect in the visual field. The vessels nearer the optic nerve are the ones most apt to be affected. The retinal changes of angiosclerosis occur more often in males than in females. Ophthalmoscopic examination is the one of most ready methods for diagnosing a vascular disease.

HANFORD MCKEE, (in the *Montreal Medical*), reports a case of extreme interest. Child of 3 days old developed a purulent conjunctival discharge, which on culture and examination proved to contain the bacillus coli communis. The cornea was not involved and only the right eye. Axenfeld and Bult have reported similar cases. Some xerosis bacilli were also found; clinically the case bore the marks of a gonorrhoeal infection.

**Sub-conjunctival Salt Injections** are quite popular. Results follow their use. Quite a field for study is at our hands concerning the iso- hypo- and hypertonicity of fluids placed in this cellular space, the use of which modify the action of the lymphatics in the orbital region. We have Darrier's cyanide of

mercury solution, normal salt solution, and the latter combined with 1% dionin; the sugar of salt (lactated sodium, etc.) are all put into this area acting by depleting the area or saturating it with some substance that brings more water there or drives it away. This tends to reduce the "salt" strength or increase it to the tonicity of those tissues in health, isotonicity. These measures have been invaluable in recent scar of cornea to aid their clearance by absorption as well as choroidal and retinal affections, hypopyon, later stage of iritis and irido-cyclitis, vitreous opacities and simple clouding.

**Dionin** has been called by more than one ophthalmologist the "greatest addition in the last decade" to the therapy of the eye. Indeed the great amount in use attests its popularity. Clinical results favor our continuance in its use, but what is it? Our chemist tells us it is ethyl morphine hydrochloride, and the therapist says it is a lymphagogue. Dionin taken internally causes a perspiration, drowsiness, and acts similar to a cocaine, acetanilid and sodium and salicylate mixture, so popular for grippal colds. Yet when the patient can go to bed it has a better effect at aborting the cold, so to speak. When dionin is dropped into a healthy eye in a 10% solution it causes a conjunctival œdema and pain which gives way to a feeling of comfort later. It is believed that the attempt of the vascular and lymphatic system to deplete the water in the œdematous area constitutes the lymphagogue propensity of the drug, though indirectly. It is quite a valuable agent to the ophthalmologist and an adjuvant to many other drugs.

**Malarial Keratitis.**—E. C. Ellett (*Jour. A. M. A.*, June 30, 1906), remarks that malarial keratitis, which consists in branching linear ulcer of the cornea best manifested by staining with fluorescein, with variable surrounding infiltration, is an unusual complication of malarial disorders. It occurs most commonly in late summer and autumn, is never multiple, is very rare in the chronic forms of malaria, rarely occurs in both eyes, and not infrequently causes serious damage to the cornea. One attack predisposes to others, but not invariably. He believes that the lesions are probably trophic, and that they follow the nerve fibers of the cornea, and the fact that the corneal nerves lose their sheaths after penetrating about 1 mm. from the corneoscleral junction may possibly explain why the lesions never reach the edge of the cornea, but follow only the unprotected course of the nerves. As regards treatment, he says that the general condi-

tion should be looked after and a change of climate may be necessary. While he cannot say that he has seen striking results from quinine, it is nevertheless considered a necessary medication. Postmalarial anemia may call for iron, and blood examinations may be a valuable aid. Locally, an antiseptic wash and atropine should be always used and the eye protected. The most striking results will often follow the application of tincture of iodine, but this is very painful, even with cocainization and immediate irrigation, and is not always beneficial. Hot applications are useful and grateful to the patient. When the epithelium is regenerated, yellow oxide ointment or some similar preparation should be used to lessen the opacity. Refraction should be looked after and proper glasses supplied as needed.

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## BOOK REVIEWS.

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AMERICAN PRACTICE OF SURGERY.—A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., Albert H. Buck, M. D., of New York City. Complete in eight volumes, profusely illustrated. Volume I. New York: William Wood & Co., 1906.

The first volume is included in five parts, which is exclusive of an introduction which deals with the history of American Surgery. This interesting resume has been written by Dr. Stephen Smith. No better selection could have been made, for he is qualified to deal with the practice of American Surgery. While he has condensed the facts, it has in no way detracted from its merit. It has been illustrated by wood cuts of most of the eminent surgeons of their day.

The first chapter deals with surgical pathology, its complications and sequelæ, general surgical diagnosis and surgical treatment, and surgical prognosis. The contributors to the first volume are such well known authors as Bacon, Bloodgood, Brooks, Bryant, Dodd, Gaylord, Hickey, McGraw, Moore, Nicholls, Nichols, Osgood, Pilcher, Smith and Warthin.

The second part clearly defines the entire structure of this work. It is devoted to the underlying principles which constitute the basis upon which surgical science is to be built. In the article by Dr. Albert G. Nichols relating to tumor formation, the topic is presented in its most modern aspect, giving the newer pathologist a classification of tumors, presenting their

histological aspect in a clear and concise manner, and is a great improvement over that which has yet been done in a general treatise on surgery.

It seems that this classification will be accepted and adopted by teachers as the simplest and clearest yet offered on account of its uniformity, which should be adopted by instructors universally. In the clause which relates to general surgical diagnosis, and which has been written by Dr. Bryant, too much cannot be said of the clear manner in which he has discussed the subject, which is in detail, and which has developed the refinement of modern methods in the most simple manner. This subject, which every practitioner and surgeon should familiarize himself with, for it is a "truism" that in a great degree the perfection of scientific technique should be understood and appreciated by those who practice surgery, for knowledge of surgical diagnosis is the very ground work of successful surgical treatment.

Another important feature is the article upon shock. No subject of late has agitated the profession more than the treatment of shock. The article of Dr. Bloodgood on shock contains much of value to those who turn to this work for reference. The direction of the book is of the very best. Its illustrations are works of art. We bespeak for this book, without fear of contradiction, a great degree of professional favor. By indications of the first volume its hearty acceptance by the surgical profession will be assured.

LECTURES ON AUTO-INTOXICATION IN DISEASE.—Or Self Poisoning of the Individual.—By Ch. Bouchard, Professor of Pathology and Therapeutics; Member of the Academy of Medicine and Physician to the Hospitals, Paris. Translated, with a Preface and New Chapters added, by Thomas Oliver, M. A., M. D., F. R. C. P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, New Castle-Upon-Tyne; Formerly Examiner in Medicine, Royal College of Physicians, London. Second revised edition. Crown Octavo, 342 pages, Extra Cloth. Price, \$2.00 net. F. A. Davis Co., Publishers, 1914-16, Cherry street, Philadelphia.

Professor Bouchard's work on Auto-Intoxication is well known on account of his prominence both as a teacher and an author. Dr. Oliver has made a most excellent translation, and has added some new material in bringing this work up to date. The larger part of this work is devoted to Toxemia as a cause of the variety of diseases. While it is well known that all ptomaines are not poison, it is here shown very clearly those which are toxic, and the part played by micro-organism. The physician will find in the study of these lectures much that he

can use in ferreting out obscure problems connected with diseases depending upon infective processes. Here it is usually the part played by excretions in their feature upon the body diseases. This book is not only of value to the clinician, but should be studied by the pathologist and laboratory worker. The book is about twice as large as the surgical volume by Bouchiard which bore the same title.

**INTERNATIONAL CLINICS.**—A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, U. S. A., with the collaboration of William Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; A. Phedran, M.D., Toronto; Frank Billings, M.D., Chicago; Charles H. Mayo, M.D., Rochester; Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James A. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburg; John Harold, M.D., London; Richard Kretz, M.D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I. Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907.

The first of the Sixteenth Series, 1906, of the International Clinics was received. Dealing, as usual, with interesting scientific data both upon medicine and surgery. It would be impossible to call attention to the many interesting articles by the leading members of the medical profession throughout the world. It is, as usual, full of interesting facts for the busy practitioner.

**THE EAR AND ITS DISEASES.**—A Text-Book for Students and Physicians. —By Seth Scott Bishop, B. S., M. D., LL.D., Professor of Diseases of the Nose, Throat and Ear, in the Illinois Medical College, etc. F. A. Davis Company, Publishers.

The author has produced a work which will at a glance appeal to the practitioner. Its fitness for the general physician and student lies principally in the excellence of the illustrations. Many of these are from specimens of the writer, and among these the ones to illustrate anatomical and surgical points are especially praiseworthy.

The chapter on the anatomy and physiology of the ear, which is more or less neglected in many of the text-books on otology, are taken up very thoroughly. The simple and radical mastoid operations are described in a lucid manner, the landmarks being indicated on the illustrations. The author has purposely avoided going into detail regarding remote complications of mastoiditis and their treatment. The work merits a good sale. A. O. P.



## BOOKS AND PAMPHLETS RECEIVED.

ARHLORHYDIA.—By Charles D. Aaron, M. D., Lecturer on Dietetics, Detroit College of Medicine, Detroit, Mich. Reprint.

INSANITY CURED BY A NEW TREATMENT. DETAILS OF TWENTY-ONE CASES.—By C. W. Suckling, M. D. (Lond.) Birmingham.

SOLUTIONS DEBELL.—By Edwin Pinchon, M. D., of Chicago, Instructor in Rhinology Laryngology, Chicago Post Graduate Medical School; Attending Surgeon for Diseases of the Nose and Throat, Dispensary of the Illinois Medical College; Assistant Aural Surgeon, Illinois Charitable Eye and Ear Infirmary. Reprint.

PORTRAIT LIST OF NEW AND STANDARD MEDICAL WORKS. Lea Brothers & Co., Philadelphia and New York.

CHANGES IN UTERINE FIBROIDS AFTER THE MENOPAUSE. Considered with Reference to Operation.—By Charles A. L. Reed, A. M., M. D., of Cincinnati, Ohio, Professor of Clinical Gynecology at the University of Cincinnati; Gynecologist to the Cincinnati Hospital, to the German Hospital, and to the Jewish Hospital; former President of the American Medical Association. Read before the British Medical Association, August 22, 1906. Reprinted from the *British Medical Journal*, London, November 3, 1906.

TUBERCULOSIS AS A DISEASE OF THE MASSES AND HOW TO COMBAT IT.—Fourth issue revised and illustrated, with supplement on Home Hygiene, School Hygiene, Installation of the Sanatorium Treatment at Home, and a Historical Review of the Anti-Tuberculosis Movement in the United States. Prize Essay by S. A. Knopf, M. D., New York, Director in the National Association for the Study and Prevention of Tuberculosis; Associate Director of the Clinic for Pulmonary Diseases of the Health Department; Visiting Physician to the Riverside Sanatorium for Consumptives of the City of New York, etc. Published by Fred P. Flori, 514 East Eighty-second street, New York. Also for sale by Charities and the Commons, 105 East Twenty-second street, New York City. 1907.

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES.

NEW AND NON-OFFICIAL REMEDIES.—A reprint from the *Journal of the American Medical Association* of the articles tentatively approved by the Council of Pharmacy and Chemistry of the American Medical Association. First Edition, March, 1907. Chicago: Press of American Medical Association, 103 Dearborn avenue, 1907.

MEDICAL SUPPLEMENT TWENTY-SECOND ANNUAL REPORT ADIRONDACK COTTAGE SANITARIUM.—Prepared in accordance with the Suggestions of the National Association for the Study and Prevention of Tuberculosis. Lawrason Brown, M. D., 1906.

THE GREAT AMERICAN FRAUD.—By Samuel Hopkins Adams. Articles on the nostrum evil and quacks, in two series. Reprinted from *Collier's Weekly*.

SYMPOSIUM ON AMEBIC DYSENTERY.—John L. Jelks, M. D., Memphis; A. A. McClendon, M. D., Marianna, Ark.; J. A. Grisler, M. D., Memphis. Reprinted from *Memphis Medical Monthly*, March, 1907.

TRYPSIN IN CANCER—A PRELIMINARY STATEMENT.—By William Seaman Bainbridge, M. S., M. D., New York. Reprinted from the *New York Medical Journal*, incorporating the *Philadelphia Medical Journal* and *The Medical News* for March 2, 1907.

CENTRAL INDIANA HOSPITAL FOR INSANE.—To the Governor, 1906.

TREASURY DEPARTMENT PUBLIC HEALTH AND MARINE HOSPITAL SERVICE OF THE UNITED STATES.—Walter Wyman, Surgeon-General. Hygienic Laboratory—Bulletin No. 33. M. J. Rosenau, Director, February, 1907. Studies in Experimental Alcoholism, by Reid Hunt. Washington Government Printing Office, 1907.

ANNUAL REPORT OF THE BOARD OF FISH AND GAME COMMISSIONERS OF THE STATE OF NEW JERSEY for the year ending October 31, 1906. Somerville, N. J. Unionist-Gazette Association, 1907.

ABNORMALITY IN AMNIOTIC SECRETION IN ITS RELATION TO FETAL MALFORMATION.—By Joseph Brown Cooke, M. D., New York. Reprinted from the *American Journal of Obstetrics*. Vol. LIV, No. 6. New York: Wm. Wood & Co., 1906.

PRINCIPLES OF SPELLING REFORM.—By F. Sturgis Allen.

## THE MANAGEMENT OF CONVALESCENCE.

In convalescence from acute diseases, such as pneumonia, typhoid fever, acute articular rheumatism, etc., we are face to face with the problem of restoring the weakened organism to its normal condition. *The blood shows a state of secondary anemia*, the nutrition is lowered, the nerve and muscular tone is below par; the appetite but sluggishly answers our urging, and the digestive powers feebly respond to the demands made upon them.

It is at the dawn of convalescence, when the danger of the illness itself has passed, when the desire to live, to get strong, is highest in the patient, that the physician's reputation often hangs in the balance. Having brought the patient through an illness, many physicians are unfortunately content to rest on their laurels, and to let long-suffering "Nature" do the rest. The wise practitioner knows, however, that Nature is grateful for the proper kind of aid in these circumstances—aid in her efforts to lead a weak organism out of the bondage of illness.

And so the far seeing physician will look about in his armamentarium for a drug or a combination of drugs which will restore the blood, the nutrition, the digestion, the assimilation, the appetite, the weight, and the powers of resistance of the sufferer to normal in the quickest possible time.

Fortunately, nature has provided two chemical elements, iron and manganese, which are as necessary to the system as life itself, and which, when given in the proper amounts and in the proper forms, will carry the patient through convalescence to health. In the delicate state of the digestion of a convalescent it is of the utmost importance that the forms of iron and manganese administered be such as to become absorbed and assimilated with the least disturbance of the gastro-intestinal organs. The old-fashioned inorganic preparations of iron which still figure in the Pharmacopœias of various countries are totally unsuited for this purpose.

The scientific researches of Hamburger, Bunge and others, conducted during the past twenty-five years, have shown the immeasurable superiority of the organic compounds of iron and manganese. The organic compounds alone have been found to be absorbable in such amounts as to produce the desired action on the blood. Of these compounds the peptonate, which is an organic-chemical combination of iron and manganese with peptone in a solution, known as Pepto-Mangan (Gude) is the most readily absorbed, and therefore the most efficient preparation of

iron-manganese known, and as such is used with the greatest benefit in convalescent anemias.

A point which is frequently lost sight of in considering the treatment of anemia is the importance of manganese as a constituent of normal blood, and as an element ranking only next to iron in its power of building blood corpuscles and increasing the life-bearing hemoglobin of these cells.

Campani, an Italian savant, as early as 1872 demonstrated that manganese is found in the red blood cells, as well as in the serum of normal blood, and the more recent researches of Lecanu and Lheritier show that manganese forms a constant constituent of the hemoglobin molecule. Furthermore, Zaleski (*Zeitschr. f. physiol. Chemie*, 1904, page 449) shows that manganese enters the molecule of hemoglobin with the same readiness as does iron, and therefore it has the same direct blood-forming power as iron. But, perhaps, the most important fact in connection with manganese is, that once having entered the red cell, it attracts iron to the coloring matter of the blood, as the recent investigations of Benedetti have shown (*Boll. Scienc. Mediche*, Bologna, June, 1905).

A consideration of the above facts will convince any unbiased physician that the preparation known as Pepto-Mangan (Gude) is made on scientific principles, in accordance with the researches conducted by the foremost physiologists and clinicians within the past quarter of a century. It contains a combination of iron and manganese calculated to secure the highest possible blood-building efficiency without in the least interfering with the digestive functions. On the contrary, Pepto-Mangan is an excellent digestive tonic, it increases the appetite and promotes nutrition. Pepto-Mangan (Gude) therefore offers in convalescence the surest, most agreeable, and most prompt road to perfect health.

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#### CODEINE SAFETY AGAIN DEMONSTRATED.

Dr. E. M. McKee, of Cincinnati, Ohio, in the *Denver Medical Times*, says: "This drug, according to Butler, is one-fourth as toxic and effective as morphine. It is less depressing and more stimulant, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal and phthisical coughs, with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes,

and it has been used for long periods without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of codeine on the alimentary canal are remarkable, in that it assuages pain as well or better than morphine, and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery. The statement that codeine is simply a 'little morphine,' only differing from the latter in the size of the dose, is an erroneous view, as can be ascertained by any one who closely observes the action of the two drugs."

Codeine, in connection with antikamnia, has stood the test of exhaustive experimental work, both in the laboratory and in actual practice, and they are now accepted as the safest and surest of this class of remedies. Therefore, "Antikamnia and Codeine Tablets" afford a very desirable mode of administering these two valuable drugs. The proportions, antikamnia,  $4\frac{3}{4}$  grs., codeine,  $\frac{1}{4}$  gr., are those most frequently indicated in the various neuroses of the larynx, as well as the coughs incident to lung trouble, bronchial affections, grippal conditions and summer colds.

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#### PAIN.

This is the condition we are most often called in a hurry to relieve. Our therapeutic measures will be gauged by the cause, location, severity, etc. A hot water bag should always be accessible. Hypodermics of morphine should be used as sparingly as possible. Papine is an excellent pain reliever that is devoid of the danger and unpleasantness of ordinary opiates. It relieves pain promptly, but does not produce narcosis, constipation, etc. W. T. MARRS, M. D., in the *Medical World*.

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The Washington State Medical Society elected these officers at its Eighteenth Annual Convention recently, when it was decided to meet at Walla Walla, southwest of Spokane, in 1908, and at Seattle in 1909: President, Dr. C. N. Suttner, Walla Walla; First Vice-President, Dr. W. H. Axtell, Bellingham; Second Vice-President, Dr. R. T. Black, Vancouver, Wash.; Secretary, Dr. C. H. Thompson, Seattle; Treasurer, Dr. L. L. Love, Tacoma; Delegate to the American Medical Association, Dr. J. R. Yocum, Tacoma; Alternate, Dr. J. C. Cunningham,





## This Index Finger

serves to point out and accentuate the fact—already known to thousands of physicians—that two tablespoonfuls of Colden's Liquid Beef Tonic, administered ten minutes before each meal, will produce far more effective results in the treatment of atonic dyspepsia than can be obtained by the exhibition of unlimited amounts of pepsin.

Colden's Liquid Beef Tonic acts specifically on the gastro-intestinal tract. It sharpens the appetite, increases the quantity and quality of the gastric juice, and tones and strengthens the gastro-intestinal musculature. Write for literature and sample

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Spokane. The Judicial Committee was instructed to take some action relative to the closer cementing of State and county legal and medical societies, as it is desired to bring these two professions closer together for the common good.

The constitutionality of the Washington State Medical Practice Act has been upheld by the United States Supreme Court in the case of the State of Washington against O. W. Lawson, manager of the State Medical Institute, charged with practicing medicine without a license. Lawson appealed from the Supreme Court of the State, and the appeal was dismissed. As a result of the action of the United States Supreme Court, Lawson will have to go to the county jail and serve the remainder of a ninety-day sentence. He was at liberty on bonds pending the action of the United States Supreme Court. Lawson was convicted in the trial court, and sentenced to pay a fine of \$100 and serve ninety days in the county jail. Lawson was arrested at the instance of the King County Medical Society, the case being the first of its kind to go before the highest tribunal in the State.

■ The Washington State Association of Graduate Nurses elected these officers at its annual meeting: President, Miss C. Loomis, of Seattle; First Vice-President, Miss M. E. Beck, of Walla Walla; Second Vice-President, Miss Clara Burnett, of Spokane; Recording Secretary, Miss Catherine Wright, of Seattle; Assistant Secretary, Miss Margaret McMillan, of Tacoma; Treasurer, Miss Wilkinson, of Bellingham; Councillors from Seattle, Mrs. Holly, one year; Mrs. A. G. Green, two years; Miss Gillespie, three years; from Tacoma, Miss Downy, one year; Miss Comings, three years; from Spokane, Mrs. Lynde, one year; Miss Hutsuf, three years; from Walla Walla, Miss Minion, two years; from Bellingham, Miss Smith.

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A most valuable agent for treating dyspepsia, indigestion and constipation is found in PIL. CASCARA COMPOUND ROBINS, Mild and Strong.

When a prominent physician, the medical director of a large sanitarium, uses 50M of these pills each year, and writes they are the best laxative he has tried in more than thirty years, it means something.

When one of the most prominent surgeons, in one of the oldest States, says in an address before the Medical Association: "In all my surgical operations I use as an alimentary stimulant only Robins Cascara Pills," it certainly means that in them he has a remedial agent giving better results than anything else he can find.

The following letter was recently received at Richmond, Va., from a physician of large experience in a large city of the Middle West: "Your Compound Cascara is certainly founded upon the soundest therapeutic doctrine. If the profession only realized the value of your goods, as they would if they would take the trouble to examine your formula as therapeutists, you could not make them fast enough for the demand."

The proprietor offers them to the medical profession as being admirably adapted to physicians personal and family use, as well as general use in practice. Samples to physicians upon request.

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Announcement is made that a sanitarium with 160 rooms and 75 baths will be established at Waukesha, Wash., near Spokane, in a short time. The structure will be three stories, fitted with every convenience, and cost \$80,000.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications.

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### FUSED (HORSE-SHOE) KIDNEY.

BY BYRON ROBINSON, M. D.,

CHICAGO ILLS.

THE subject of renal anomalies in renal surgery has a never-ending interest. So far as I have been able to observe from the literature no fused or horse-shoe kidney has been diagnosed, pre-operative or pre-autopsic. Hence the subject of renal anomalies possess increasing interest when such be the condition, and that operative interference subsequent to peritonotomy would jeopardize the patient's life. From colleagues, from museums, from autopsies and literature I have collected specimens and illustrations of over sixty fused (horse-shoe) kidneys, and in this short article I present the chief characteristics of numbers 26, 32, 36.

Fig. 26—Fused (horse-shoe) kidney. Renes arcuati distal (distal poles fused). *Explanation of illustrative signs:* Z, right renal mass; A. R., arteria renalis; V. R., vena renalis; X, isthmus; 2, ureteral pelvis; 3, proximal ureteral isthmus. *Presentation*—Ventral view. *Isthmus renalis*—X, parenchymatous. Dimension, liberal renal fusion. Location, directly ventral to aorta and vena cava, but dorsal to ureters. Both ureters and isthmus renalis lie ventral to vasa abdominalia magna. *Hilus renalis*—Bilateral hilus unicity and symmetry (as to position, form,

dimension). Location, on ventral renal surface. Dimension, medium, liberal. Form, possesses definitive circumference margin. *Sinus renalis*—Consists of a segment of a great sphere, or practically a flat plane. *Ureter proprius*—Bilateral ureteral unicity and symmetry (as to form, dimension, position). Location, on ventral renal surface. Form (isthmuses and dilatation) marked, and dimension with

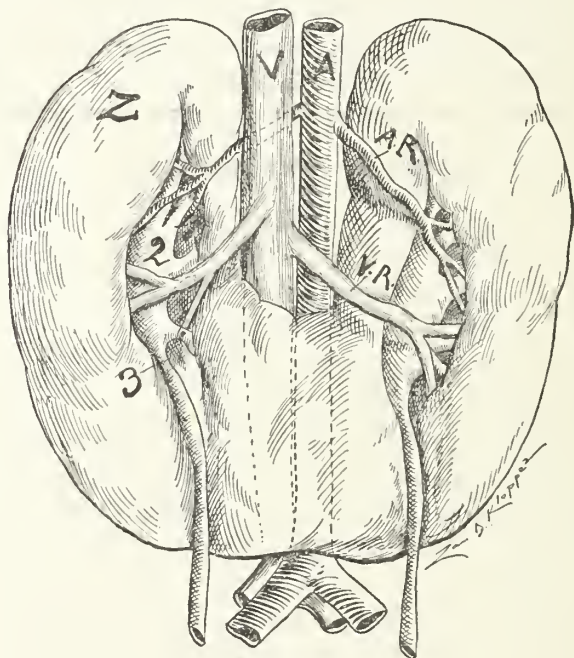


Fig. 26.

no renal range. Course, as usual. *Pelvis uretoris*—Bilateral pelvic unicity and non-symmetry (as to number, form, position, dimension). Left 5, right 8. Location on dorsal, renal surface. Form, distorted and irregular. Dimension, liberal. *Vasa renalia*—Bilateral vascular unicity and symmetry (as to position). Arteries and veins separately joined as to origin. The renal vein is ventral to the renal artery, X. Both renal artery and vein course distalward. The veins are located more distalward than the arteries. The vessels are especially located toward the proximal renal poles. *Topography*—Holotopia is located excessively medianward. Skeletopia abnormally intimate



with vertebral column. Syntopia, abnormally intimate with aorta and vena cava. Idiopia, distal renal poles is rotated abnormally medianward. *Form*—Crescentic, U-shape. *Symmetry*—Bilaterally symmetrical. *Surface*—Lobulated, fissured. *Dimension*—Equivalent to two kidneys. *Position*—Distalward congenital renal dystopia. (Presented to me by Dr. Whitacre, of Cincinnati, Ohio.)

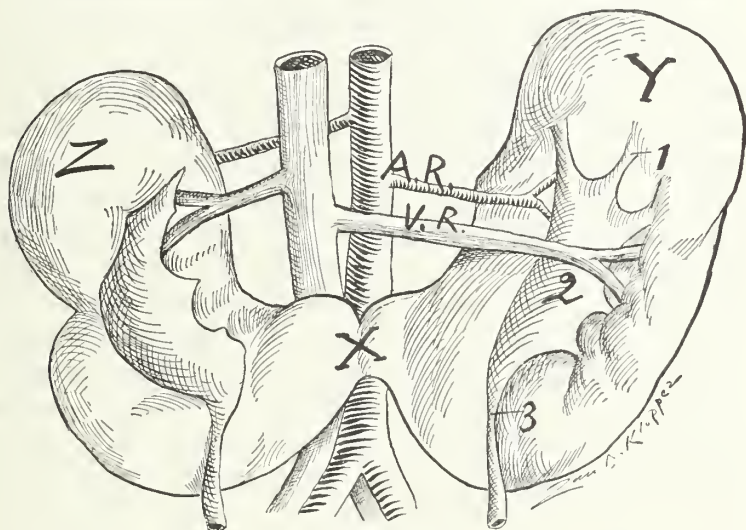


Fig. 32.

Fig. 32—Fused (horse-shoe) kidney. *Renēs arcuati distal*. *Explanation of illustration signs*: X, isthmus renalis; A. R., arteria renalis; V. R., vena renalis; Z, right and Y, left lateral renal mass; 1, calyces; 2, pelvis ureteral; 3, isthmus proximal ureteral. *Presentation*—Ventral view. *Isthmus renalis*—X, parenchymatous. *Dimension*, minimum fusion. *Location*, at distal renal pole and also ventral to aorta and vena cava, but dorsal to ureters. The isthmus renalis lies directly between ureters (ventrally) and aorta and vena cava (dorsally). Both isthmus renalis and ureters lie ventral to vasa abdominalia magna. *Hilus renalis*—Bilateral hilus unicity and non-symmetry (as to position, form, dimension). *Form*, irregular. *Dimension* (diameters). *Location*, on ventral renal surface, ill defined margin. *Vasa renalia* enter left hilus; however, the right hilum receives the right renal vein only; the right



renal artery, resembling an accessory renal, penetrates the renal parenchyma like a saber without first passing through the hilum. *Sinus renalis*—Left sinus renalis is practically a plane. Right presents a defined renal excavation ensconcing the calyces. *Ureter proprius*—Bilateral ureteral unicity and symmetry (as to position, form, dimension). It is located on the ventral renal surface.

The form (isthmuses, 3, and dilatation, 1, 2) distinct. Dimension and course normal. *Pelvis ureteris*—Bilateral pelvic unicity and symmetry (as to position, dimension), non-symmetry (as to form). Location, on ventral renal surface. Form, irregular. Dimensions, maximum. *Calyces ureteris*—Left, 5. Right not exposed. Bilateral pelvic unicity and non-symmetry (as to form, position, number, distribution). Location, on ventral renal surface. Dimension, liberal. Distribution, over extensive renal area. *Vasa renalia*—Bilateral vascular unicity and symmetry (as to position and length). Vasa renalia paired both as to veins and arteries. Renal veins distal and ventral to renal arteries. Vasa renalia enter hila except right renal artery, which, resembling an accessory renal, penetrates the renal parenchyma like a poniard without first passing through the hilum. *Topography*—Holotopia, distal renal poles excessively medianward and distalward. Skeletopia, abnormally intimate with the vertebral column and sacral promontory. Syntopia, abnormally intimate with the vena cava, aorta and vasa iliaca communis. *Form*—Crescentic. *Symmetry*—Bilaterally non-symmetrical. The chief lateral renal mass tends leftward and proximalward. *Surface*—Lobulated, fissured. *Dimension*—Equivalent to two kidneys. *Position*—Distalward congenital renal dystopia. (After Dr. Gibb, modified.)

Fig. 36—Fused (horse-shoe) kidney. Renes arcuati distal (distal renal poles fused). *Explanation of illustration signs*: A. S., arteria supre-renal, ar<sup>1</sup>, ar<sup>2</sup>, ar<sup>3</sup>, arteriæ renales, ar<sup>4</sup>, arteria renalis, from arteria iliaca communis. *Presentation*—Ventral view. *Isthmus renalis*—Parenchymatous. Dimension, limited fusion. Location, at distal renal poles, and also ventral to aorta and vena cava; how-

ever, dorsal to ureters. The isthmus renalis lies immediately between the vasa abdominalia magna (dorsally) and the ureters (ventrally). Both isthmus renalis and ureters lie ventral to aorta and vena cava. *Hilus renalis*—Bilateral hilus unicity and symmetry (as to position), non-symmetry (as to form, dimension). Located on ventral renal surface, with ill defined margin, and receives but part of the vasa renalia. Form, irregular, dimension (diameters) non-defini-

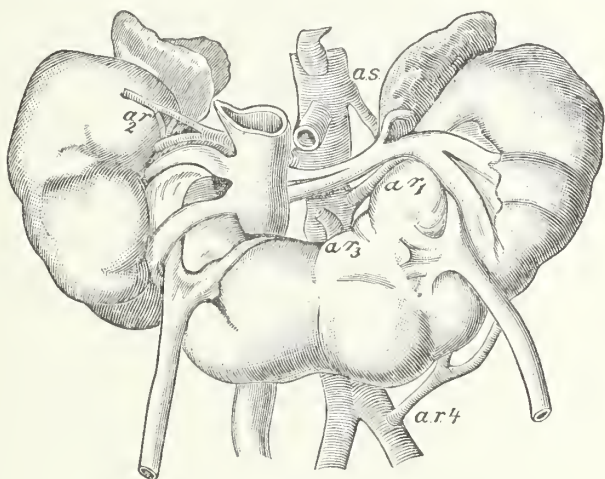


Fig. 36.

tive. *Sinus renalis*—Renal excavation of limited depth, ill defined diameters. *Ureter proprius*—Bilateral ureteral unicity and non-symmetry (as to position), symmetry (as to form, dimension). Location, on ventral renal surface. The form, isthmuses and dilatation, dimension normal. Course of ureter, distorted. *Pelvis ureteris*—Bilateral pelvic duplicity; non-symmetry (as to form, dimension), symmetry (as to position). It is located on ventral renal surface. Form irregular and dimension diminutive. *Calyces ureteris*.—Bilateral calicular duplicity, and non-symmetry (as to form, dimension), symmetry (as to position). The calyces (4, bilaterally), are irregularly distributed over extensive parenchymatous areas. *Vasa renalia*—Right, one artery and two veins; left, four arteries and one vein. Vasa renalia bilaterally non-symmetrical in number and position, as well as unpaired. One renal artery on the

left arises from the left common iliac, and penetrates the kidney without first passing through the hilum. On neither lateral renal mass do all vasa renalis pass through the hilum. One renal artery, ar<sup>3</sup>, supplies the isthmus renalis. Renal veins located ventral to renal arteries. *Topography*—Holotopia, distal pole excessively centralward and medianward. Skeletopia, abnormally intimate with the vertebral column and promontorium sacrum. Syntopia, excessively adjacent to aorta, vena cava and vasa iliaca communis. Idiopia, distal renal pole abnormally rotated medianward. *Form*—Elongated crescent. *Symmetry*—Practically bilateral symmetry. *Surface*—Lobulated, fissured. *Dimension*—Equivalent to two normal kidneys. *Position*—Distalward congenital renal dystopia. (After Prof. Earnest Kuester, of Marburg, Germany.)

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## HAY FEVER.

BY J. M. IRWIN, M. D.,  
LOUISVILLE, KY.

THE subject of hay fever is of such importance that I thought it would be well to write something on it in order to obtain additional information, especially as I am personally interested in the disorder.

Not many years ago hay fever was referred to by those who had never been its victims as a joke. None but persons possessed of an abundance of this world's goods, it was said, could afford to have the disease.

Before the year 1860 very little was known of hay fever. Especially was this the case in America. Some reference to rose-cold could be heard, but the disorder was so little thought of that no special attention was given to it by physicians.

In 1860 statisticians had collected the reports of about six thousand cases in Europe and America. The greater number of cases were in England. Since that time the number of hay fever sufferers has increased in North America until it has reached upward of a million.

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\* Read before the Louisville Clinical Society, May 28, 1907.

Medical writers have described the disease under various names: As rose-cold, summer catarrh, autumnal catarrh, hay fever, hay asthma, and hiperesthetic rhinitis, and defined it to be a catarrhal affection of the mucus membrane of the eyes, nose, mouth, pharynx, larynx and bronchi, at times accompanied by dyspnea and asthma, induced in persons predisposed to it by the pollen of various plants and cereals, chiefly the *aetimesia ambrosia*, or rag-weed, and the *soledago odoro*, or golden rod; dust, smoke and disagreeable animal odors.

Hay fever occurs in Europe and North America, and the number of cases in England annually doubled that of any other country until after the gripe visited our hemisphere in 1889.

Since then the number of cases in America far exceed that of all Europe. The Anglo-Saxon race appears to be more liable to it than any other people.

The greater number of cases occur in brain workers; peasants and those who work with their muscles seldom have hay fever. More men have hay fever than women, because the former are more exposed to the outdoor atmosphere, which is heavily laden with pollen, and attacks are much more severe in men than in women.

The inhabitants of cities and towns, visiting the country, are more liable to attacks than those who live permanently in the country.

There are two causes recognized for hay fever, constitutional and local. Changes in the vasomotor and sensory nerves, which terminate in the mucous membranes of the air passages (often the result of *La Grippe* or heredity), render the membranes capable of being irritated by the pollen. When those membranes are very sensitive because of much irritation, the sun's heat and certain odors, vegetable and animal, and particles of dust, augment the suffering. The pollen of grasses, cereals and numerous plants exert a specific causative local influence.

Quantities of pollen float in the air during the summer months, but in this country the atmosphere is rarely polluted enough before the 10th of August to give rise to the

disease. Some seasons, when vegetation is slow in growth, there is less pollen in the atmosphere, and the number of hay fever sufferers and the severity of the disease seems lessened. The fever increases in warm, damp weather, and decreases when it is dry and hot, and after heavy rain. Cold, wet weather affords great relief to sufferers by checking the inflorescence of plants and settling the dust.

An attack of hay fever generally comes on without any warning, though sometimes there are evidences of its approach immediately on the application of the pollen to the mucous surface.

The first symptoms are itching about the eyebrows and forehead, and a stinging, burning sensation of the lobes of the ears; then the eyes, nostrils, roof of the mouth and fauces itch and become slightly inflamed.

The catarrhal stage is now reached, attended by violent attacks of sneezing and a watery discharge from the eyes and nose, with pain in the head and sinuses. The membranes of the nose swell, and soon the nostrils become impervious to air. If the patient lies on his side the upper nostril will usually open, while the lower will become occluded. The wings of the nose become red and inflamed and often bleed. The inflammatory stage is then at its height, and the nasal discharge becomes less in quantity, muco-purulent, and gradually subsides with at first a dry, hacking cough; later expectoration. The mucus membrane of the eyes often becomes inflamed and odematous, the odema extending sometimes to the eyelids.

The membranes of the pharynx, larynx and the eustachian tubes undergo similar changes, and considerable deafness often results from obstruction in the eustachian tubes. The mucous membrane of the bronchi becomes odematous, and asthmatic attacks are present in many cases. Emphysema of the lungs has been known to occur.

Dr. McKenzie, of Baltimore, has found that the asthmatic symptoms were due to odema of the posterior pillars of the inferior turbinated bones, and by the use of the galvano cautery he has effected relief and some cures.

Some fever has been observed, but this symptom is not



always present. The pulse is usually increased in frequency and feeble; urine scanty and highly colored; the patient becomes weak and nervous, and his appetite fails.

Attacks of hay fever occur annually, and in many instances on the same day of the month in the same person, lasting three weeks, or until after frost appears. One attack of hay fever conduces to another.

*Treatment.*—The exciting cause of hay fever should be borne in mind, for without the exciting cause the tissues might remain susceptible, but the disorder would not manifest itself.

Mr. Blackley has shown that a few particles of pollen may be in the atmosphere without giving rise to hay fever, but if ten particles of pollen were present on a square centimetre of gelatine-coated glass that had been exposed to the air for twenty-four hours, the disorder would be sure to appear in those predisposed to it.

If at the beginning of the hay fever season the patient is in robust health, no preparatory medication can do any good, but if the system is out of health, general principles should govern the treatment.

As the disorder progresses the appetite fails; the patient becomes nervous and irritable; the heart's action quickened and weakened, and the various organs of the body become sluggish in their action. Such remedies as are indicated may be given.

For one week before the onset of hay fever, and throughout the whole course of the disorder, one drachm of sweet spirits of nitre may be given in a tumblerfull of water three times daily, which will exert a decidedly beneficial influence in lessening the severity of the attack.

If the uric acid diathesis is present, one heaping teaspoonful of Carlsbad salts, as is prepared in the effervescent state by the Kutnow Brothers, may be given once or twice daily.

When odema of the bronchi occurs, heroin, one-sixth grain, and atropia sulph., one, one-hundred and fiftieth grain, given hypodermically, will afford relief.

Asthmatic attacks are best relieved by the hypodermic

use of heroin, one-sixth grain, and hyocine hydrobrom., one two-hundredth grain.

When the abdomen becomes suddenly distended by gas, which it often does, causing much distress, morphia sulph., one-fourth grain, and strychnia sulph., one-thirtieth grain, injected hypodermically, will give the quickest relief.

When weakness and nerve depression occur, stimulants taken in moderate quantities are useful.

The diet should be highly nutritious and easy of digestion.

All excitement should be avoided, and physical exercise does harm by increasing respiration, and thereby causing more pollen to be taken into the air passages.

Locally, all unguents, douches and fluids to be used with mops or as sprays, should be free from irritating substances and rank odors, unless it be necessary to remove from the air passages abnormal formations. A saturated solution of quinine sprayed into the nose three to six times daily at the beginning of the attack is useful.

When the nasal membrane is swollen, adrenalin chloride, one part to two or three thousand parts of a weak solution of salt, sprayed into the nose and eyes frequently, affords relief.

Liquid albolene, when cold and used with a dropper glass or nebulizer in the nose, is a source of much relief. Towels wrung out of hot water and applied to the entire face at short intervals helps to allay the distressing itching.

Finally, where the use of cocaine is not contraindicated a four or six per cent. solution sprayed into the nose and eyes in moderation will give positive relief for a short time.

I have used Dr. Dunbar's pollantin with care and perseverance, and my observation, on the whole, is that it has done more harm than good.

Climatic conditions afford more relief than anything else that can be done with medicine.

The most satisfactory results have been obtained by avoiding exposure to the exciting cause.

Those who cannot avail themselves of a suitable climate

should remain as much as possible within doors. Where circumstances admit, change to the seaside frequently effects speedy relief and sometimes a cure. A locality where the wind usually blows from the sea should be selected, or high mountains where there is not much grass, and no rag-weed or golden rod; and where this cannot be done, closely inhabited cities, with few grassy squares, should be preferred.

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## THE RELATION OF THE PHYSICIAN TO PATIENTS WITH A PHTHISICAL TENDENCY.

BY W. ED. GRANT, M. D.,  
LOUISVILLE, KY.

SINCE it is a well established fact that phthisis is acquired through contagion, and that it may almost be said that it comes in no other way, our duty as preservers of the health of those entrusted to our care stands out in lines of bold relief before us. We at once become educators, instructors and guides of our clientel. The popular impression that phthisis belongs to families, and it cannot be avoided by children of phthisical parents, is so deep-rooted in the public mind that it is not surprising that our people are deaf to all warnings about prophylaxis.

Of course we know that the individual may be endowed by his parents with an indifferent physique, and that an impaired physical development weakens constitutional vigor, and in this way prepares a fertile soil in which the seeds of disease which may here fall by chance, take root and grow rapidly, finding less to impede their growth than they would if planted in the same place in one of a more vigorous constitution. This recalls the parable of the sower who found the seed growing vigorously in well prepared ground and perishing after feeble effort in stony ground.

If the above be true, we have two things to watch. We must first see that our patients are protected from contagion, and next we must see that they are kept in as vigorous health as possible. In order to do this effectually

we begin with the child, and watch him until he has attained manhood's estate. A good carriage, healthy digestion, with proper food and outdoor life, are the essentials of developing a vigorous physique. The simplest rule I have ever known and a certain one to secure a good carriage is to keep the neck at all times back against the collar button. Do not trust to shoulder braces; they weaken the muscles which must be taught to hold up the shoulders. Many people are under the impression that it requires eternal vigilance if you would teach one to hold himself straight, but this is all a mistake. Eight weeks of such training is all that is required to teach the newcomers at a military school to hold themselves erect. In other words, a good carriage is secured in the first two months without braces. It seems incredible that such an important essential to health and one so essential to self-respect can be permanently secured in eight weeks' time.

The laity does not realize that long, narrow, flat chests are good breeding places for the germs of tuberculosis, for the reason that they are so rarely perfectly filled with fresh air well laden with oxygen. The apices of the lungs, even in healthy people, are the parts which expand the least, and which usually contain indefinitely impure air that might be changed any time for pure by proper, deep inspiration and expiration. It is important that we should impress upon our people that the apices of the lungs are very cesspools of filth, in which microbes flourish and breed (as millions of mosquitoes do about water in a filthy pond), and that if the air they contain is not frequently renovated and removed by proper breathing, that the health will be destroyed. If we could succeed in doing this we would have no trouble in securing their co-operation in putting up a good fight for life. We must not only insist that what we advise is for the best, but must demonstrate the reason why in order to make our teaching effective.

The laity can understand why certain kinds of coal is better and more useful than other kinds because of their practical experience, but a large majority eat because their

stomachs are empty and the food is appetizing, without any knowledge or thought whatever of what food is useful and necessary to support the strength and invigorate the body. They hardly know the difference between albumen and starchy foods, and have no idea of the difference in value as a food between a turnip and a potato, or a squab and a beefsteak. Their children are fed upon trash until their bodies are weakened and digestion impaired. We cannot have vigorous live stock without proper food, and we cannot have vigorous children if we feed them trash and keep them in dark rooms in hot houses, and the same holds good in those adults who are emaciated and weakened by the ravages of disease. Medicines are useful, but are valueless without good food, fresh air and proper muscular exercise. In looking for the sign posts of phthisical tendency, I would not belittle the family history. A feeble constitution can be transmitted from parent to son, but not latent tubercular germs. It is the feeble constitution that puts forth the least resistance to the parasite in plant as well as in animal life. If we are looking over the flower garden for parasites we are certain to find them the most abundant on those plants which show the least vigor, but the vigorous ones are not immune, for they, too, will in turn be attacked and destroyed if we do not aid them by furnishing weapons with which they may defend themselves. We have an efficient remedy at hand, which we apply, and all is well. What is it? We sprinkle the plant with a little water impregnated with Paris Green, which poisons the parasite and destroys it.

Unfortunately, we have nothing to feed a tubercular germ on after it is once located in the body which will destroy the germ without also destroying the individual attacked; therefore, if we are to do effective work, we must destroy the tubercle bacillus while it is on its way to the body. Most fortunately for humanity the possibility of accomplishing this has been clearly demonstrated, efficient weapons for defense have been provided, and all we have to do is to teach our clientel how to use them. The physician who prescribes a little creosote and a tonic for a



patient with suspected tubercular trouble and tells them to call again is most culpable and untrustworthy. He has probably given his patient good medical advice, but he is criminally unmindful of the health and rights of all other human beings who are to be closely associated with the afflicted one. He knows that each mass of sputa expectorated by this patient is like a stick of dynamite, which, under given circumstances, will explode and destroy life. The fact that a great majority of the cases of tuberculosis are disseminated through dried sputa, the germ being received into the body through the medium of the lungs, leads inevitably to the conclusion that the disease may be eradicated by the destruction of the sputa.

If it is not practicable to destroy the sputa, it is possible to imprison the germ it contains; for so long as the sputa is kept moist any bacilli it contains remains in it and cannot escape. As nothing else about the patient is infectious, not even the underclothing or bedding unless the sputa is permitted to fall on them and dry, we have to direct our attention to but one thing in prophylaxis, namely, the care of the sputum. It must not only be kept moist, but the receptacle in which it is received must be covered with cheese cloth to keep the flies away from it, for they will carry away on their feet germs of tuberculosis which will in time mingle with the dust and rise in the air. The cheese cloth must be changed twice a day, and either burned or immersed in a disinfecting solution. A sputum cup with a lid, such as are found in most hospitals, is the best cuspidor. We must continue our care in the matter of disinfection far along in the progress of the disease, even to the care of the furniture and walls of the room in which a patient has lived and died. We will never do too much; the danger always lies in our doing too little.

Kissing people affected with pulmonary tuberculosis should be interdicted, as the germs get on the lips of the healthy which come in contact with those who are diseased, and contagion in this way becomes direct. Of course much of the danger may be avoided by washing

the lips when contagion from this source is feared. Having protected the associates of an individual affected with tuberculosis, we next consider what we may do in the way of treatment. We first turn to medicine and food, because they are always at hand and may be applied at once, and next to hygiene and climate.

*Of medicine:* We are still experimenting with serum therapy, and I hope good will come of it. My own experience is that patients appear to improve under it and then go back again rapidly, and it has appeared to me that they were only buoyed up temporarily with a hope that recovery was at hand. In regard to internal medicine anything which invigorates is useful. Experience has demonstrated that creosote is a very valuable remedy, but anything that improves digestion and increases the assimilation of food may be combined with it with great benefit. Creosote should be given for a long time, and it is important that it should be given in gradually increasing doses; it is greatly assisted by a change to a favorable climate. The systematic relation of the diet demands most careful consideration. Emaciation is one of the early signs of consumption, and if we can counteract the loss of flesh we feel confident that the disease is in abeyance for the time being at least. Animal foods are most important, but vegetables are by no means to be excluded. Milk is one of the best foods we have. Alcohol, sometimes regarded as a medicine, is really a food, and one of the highest forms, as it is taken into the circulation without having to wait for digestion.

Climate is a consideration of first importance. In fact, I have little hope of being able to bring about any permanent relief in phthisical patients without the aid of a dry climate with proper altitudes.

## GANGRENOUS APPENDICITIS.

BY J. M. SLEICHER, M. D.,

SEATTLE, WASH.

MRS. L., aged 57 years, occupation, housewife, consulted me October of last year for stomach trouble. She recited the following history: "For the last ten or twelve years I have been troubled with my stomach. The beginning of this trouble, as far as I can remember, dates back that far. Whenever I ate certain articles of food I felt a distress which would commence shortly after eating, and consisted in a sensation of bloating and a desire to belch up gas. Should I accomplish the belching, I would feel immediate relief, but whenever I could not, I often had to resort to loosening all my clothing around the waist; then I would feel relief. It has steadily increased in severity, so I learned from experience what articles of food agreed with me, and only used such as would give me the least distress. At the present time only a few articles on the list of diet remained for me to eat, and these, most of the time, cause such a distress that I am forced to seek relief. I vomit frequently and easily, not only portions of the food partaken, but a yellow watery fluid without much taste or smell to it."

I questioned her closely as to her habits of life, former sickness, previous condition of health, appetite as to sweet or sour articles, whether she ever suffered from jaundice, ever received a personal injury in any form, and previous residence. Her personal and family history good, never suffered from injury or any other sickness, except passed through several confinements, and they were normal deliveries and uninterrupted recoveries. Two and a half years ago she had a slight attack of what the doctor in attendance called catarrh of the bowels, lasting about a week. She was well preserved for her age, and well nourished for the amount of food partaken, and passed the menopause five or six years ago.

I made a careful examination, palpating the abdomen over stomach and intestines, found no tenderness except

over McBurney's point, and a dilated stomach, but no part of it enlarged or hardened. The liver was of normal size, and no tenderness over gall-bladder. I advised the removal of the appendix, but patient would not consent to it. It is an undisputed fact that the majority of the so-called stomach troubles, where there is no abnormal acid condition or neoplasms present, are due to the following sources in the order named: Chronic appendicitis in its various stages; chronic cholangitis, especially where patient had previous attacks of jaundice (one or more); chronic constipation, and pancreatitis, especially when the ductus Wirsung is involved to a greater or less extent. I am of the opinion that the attack of "catarrh of the bowel" she suffered some two and a half years previous was nothing less than an attack of appendicitis. I analyzed the stomach contents, using Boss' test for H C L, Uffelmann's test for lactic acid, and Gmelin's test for bile pigments, but found no abnormal quantity of hydrochloric acid, neither lactic acid, but found some bile pigment at various times during treatment from October to May last. She was constipated, and had to use remedies continually for that purpose; also suffered more or less from eructations of food. I treated her medicinally, hygienically as to food, and the X-ray treatment for her stomach trouble. She improved under this treatment, and was comfortable; could eat some more food without untoward effect which formerly disagreed with her, and her constipation was relieved.

On May 4th her daughter telephoned to send something, as her mother was suffering from pain in the stomach. I sent an anodyne, which gave her relief, but on the following day another phone message came to call and see her, as she was not relieved as much as she liked to have her to be. I called, and found she was suffering pain in the right side over McBurney's point, pain and tenderness as well as rigidity of the abdominal muscles of the right side. According to these three cardinal points, my diagnosis of appendicitis was confirmed. I immediately had her conveyed to the hospital, where she arrived late in the evening,

rather exhausted from the trip. During the latter part of the evening she was prepared for the coming operation. The next morning I opened the abdomen over McBurney's point. In so doing I found the sub-muscular tissue and epi-peritoneal fat darker than the natural color, remarking to my assistants that we would find conditions that would give us a great deal of trouble. When I opened the peritoneum and tried to pack the surrounding space with gauze, I accidentally touched the enlargement, and it ruptured, discharging a large quantity of foul smelling liquid mixed with some pus, fecal matter and dark blue particles of necrosed mucous tissue. Finding the cavity was well walled off with weak, recent adhesions, I refrained from further manipulation for fear of breaking through the adhesions and carrying some of the contents into the abdominal cavity, and simply drained the wound. The discharge had the characteristic odor of gangrene. The wound was irrigated daily, but on account of the fecal matter discharging therefrom it could not be kept thoroughly clean, and interstitial, or, rather, sub-cutaneous infection occurred. About the tenth day a portion (the distal end) of the necrosed appendix came away, and about six or eight days later quite a large portion of the wall of the cæcum, about three-fourths of an inch wide and about one and one-half inches in length, with the base and balance of the appendix attached came away, all necrosed, and of the dark blue characteristic gangrenous color.

From this time on more fecal matter discharged through the wound than through the natural way, and as soon as the subsidence of the inflammatory conditions warranted (May 24th), she again consented to submit to a second operation to repair the ruptured opening in the caecum. The wound presented the following: There was perfect adhesion of the ragged edges of the wound in the colon to the peritoneum to the edge of the abdominal wound. The posterior wall of the colon formed the floor of the wound, however, pushed upward by adhesions and infiltrations below. After separating the caecum and peritoneum and denuding the edges of the wound, we repaired the wound



in the colon with double Lambert sutures, closed the peritoneum and abdominal wound separately, left drainage tube in it. Patient rallied nicely from the anesthetic, but owing to sclerotic condition of heart and arteries, about six o'clock on the same day, her heart began to fail progressively, notwithstanding every effort was made to counteract it, and about ten o'clock the same evening she expired.

Appendicitis has been discussed so often, and in all its stages, its dangers and various methods of treatment, so we will refrain from these details, but a few points in this case stand out as prominent factors, and these we shall endeavor to make plain, if possible, and are as follows: 1st, What is gangrene? What caused the rapid development of these conditions in this case? What factors were potent in this case to interfere with the circulation? Where was the pressure, if any, located? Let us, for a moment, look at the circulation in these parts. The blood supply to the caecum and appendix is from the superior mesentery artery through the appendicularis artery, a branch of the ileocolica, and the colica dextra, which also anastomosis with the colica media, with a number of smaller anastomosing arteries, hence we see that the blood supply in this portion is plentiful.

Now, the attack she suffered two years and a half ago must have been of an inflammatory character, and after this inflammation subsided left the tissues hypertrophied and pressed upon the blood vessels, lessened their caliber, and improperly supplied the nourishment to these parts. It may also have been caused by the lower end of the caecum being filled with enterolith, and a constant pressure of these from below upwards, and the gases formed from her constipated condition distended the walls of the caecum, more firmly crowd upon the encroached blood vessels, and an easy access of the bacteria to penetrate through the distended tissues and infect the veinules. When such pressure is produced by stasis and exudation, with stretching of tissues or overcrowding them with inflammatory products as to virtually strangle them, in conse-

quence of all which they die. One thing sure, we have no gangrene unless the nutrient vessels are obstructed by either constriction or wholly obliterated by some inflammatory process. In those parts affected we find various kinds of bacilli, such as the colon bacilli, staphylococcus albus and aureas, but for the most part by the saprophytic bacteria; however, several different microbes have been found capable of producing primary gangrene. There must have been a well defined line of demarcation, as the edges of the opening in the caecum were rounded and apparently healed from all inflammatory conditions.

We find whenever the whole appendix is affected it is usually due to thrombosis, and in this case, as it ran a rapid course, the veins must have been the primary source, and through the veinules and arteries also became affected. When there is a complete arrest of the venous circulation thrombosis soon follows on the arterial side; hence, we have a complete arrest of the circulation. What is gangrene? The word itself means to *gnaw*, but the common accepted term is death of an entire tissue or member, and is, for the most part, secondary to other forms of necrosis, and must be putrefactive necrosis. It is due directly to chemical or mechanical injury, to impairment of its blood supply. In these dead cells or tissues a certain gas, sulphuretted hydrogen, is formed, and this gas, coming in contact with the iron in the blood, causes the characteristic color of the parts affected.

As gangrene is a diseased condition of the blood vessels, we can readily see where the primary affection began, whether in the veins or arteries, by the nature of its condition, if dry or moist. When the arteries are the primary seat the gangrene will be dry, on account of the lymphatics and the veins carrying away the moisture left in the cell or tissue, but soon the infection is carried over to the other side to the veins proper, and they soon will be occluded from the ensued phlebitis. Vice versa, from this process we have the reverse condition, namely, a moist gangrene. It is clear from this case that the infection began in the veins, and from phlebitis upon the scarred battlefields where the

royal conflict waged between the phagocytis and the invading army of bacteria, and the subsequent putrefactive changes are dependent upon the amount of heat and moisture present.

The tissues involved become soft and pulp-like with the liquifaction of the fat and cellular elements. Putrefactive bacteria gain ingress, and give rise to the chemic change of putrefaction. Gases may be produced, and these, infiltrating the gangrenous tissues, the blood pigment breaks down and discolors the fluids. These gases of putrefaction give rise to the horribly fetid odor at times present. The line of demarcation, as spoken of above, occurs where the gangrenous mass joins the living tissues, as this line represents the point at which the tissue is viable, and where tissue death and the processes of infections are arrested, although the chemic agents engendered below this point may be absorbed. At this line embryonic tissue, followed by granulation tissue, developes, and these separate the dead from the living tissue. In the soft part this progresses very rapidly, while, however, in hard or bone substances this process is much slower. It does not, however, require that the dead tissues should be separated from the living before putrefaction proceeds, but advanced fatty changes occur in the cells which eventually liquify.

During this destructive metabolism of tissues, induced and carried on by bacteria, there is, in addition to the products mentioned, certain chemic bodies, always the essential result of microbic growth, viz.: ptomaines; these are the decomposition of proteids by the action of these bacteria, and give rise to another poison of an alkaline base. Among some of these which have been isolated are the cadaverine, putrecin, saprin, and some of the aromatic group, such as the indol, phenol and cresol. These are usually highly diffusible and rapidly absorbed by the living tissue and enter the circulation, give rise to the systemic symptoms of gangrene. We well know chemically, we can readily understand pathologically, how the intensity of the symptoms depends upon the amount of poison generated in the gangrenous focus and the rapidity of its

absorption, as well as the resisting power of the patient.

*Summary.*—1st—It is always better to operate for appendicitis just as soon as the diagnosis is made and confirmed.

2nd—In early operations you encounter the least difficulties, and recoveries are more rapid and less complicated.

3rd—In the majority of cases of stomach trouble, the primary cause is usually found in the appendix, gall bladder and chronic constipation.

4th—The rapid necrosis in this case was due to phlebitis in the veinules of the appendix, causing a rapid liquification of the cells and soft tissues, while in hard tissues the liquification is slower and not so well marked.

5th—The reparation of the ruptured caecum was delayed until the necrosis had sloughed away and the inflammatory processes had subsided.

6th—No doubt this general condition contributed factors detrimental and augmentative characteristic, hastening the already defective heart to fail with no response to stimulation.

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## MEDICINAL TREATMENT OF GALL-STONES.

BY H. RICHARDSON, M. D.,

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BALTIMORE, MD.

THE theories of the formation of gall-stones are still exercising the pathologists, while the problem of their solution *in situ* remains unsolved by the clinician, who is turning his cases over to the surgeon.

Cholesterin gall-stones appear to be the result of an infection, producing an inflammation of the walls of the gall-bladder and a reduction of the total solids of the bile, especially of the bile acids with an increase of cholesterine.

Herter and Wakeman have found that they produced the same results by injecting mercuric chloride into the gall-bladder of starving dogs, showing that bacterial in-

fection is not necessary to produce a condition of bile favorable to the formation of gall-stones.

The questions arise, why should an inflammatory condition of the gall-bladder reduce the quantity of bile acids, and in what part of the organism are the bile acids formed? Crofton has produced both bilirubin and glycocholic acid by the action of hemoglobin in the presence of glycogen or glucose and trypsin; he has also shown that the bile acids exist normally in the blood in very small quantities. It seems improbable that the bile acids should be formed in the gall-bladder, it being more likely that they are formed in the liver or in the blood in very small quantities. As they are resorbed from the intestinal tract a very small amount is required to keep up the quantity necessary under normal conditions to hold the cholesterine and bile pigments in solution.

The liver contains the bile acids, at least that quantity which is resorbed from the intestine, and it is possible that the newly formed acids are excreted into the gall-bladder from its mucous membrane, so that any inflammation of that membrane prevents their excretion. If this is so, inflammation of the gall-bladder would gradually reduce the quantity of bile acids in the bile, only that which was reabsorbed from the intestine being available, which would gradually decrease in quantity.

Whatever may be the method by which the bile acids are removed in quantity in gall-stone, the fact is patent that if there is a sufficient quantity of glycochocolate in the bile, the cholesterine will be held in solution, and gall-stones will not be formed. Austin (*Journal of Medical Research*, 1902) analyzed the bile from fistulas, the result of operations for gall-stones, when there was complete occlusion of the duct. In three analyses he obtained the following results:

	Total Solids.	Mucin.	Water.	Cholalic Acid.	Choles- terine.	Lecithin
"A" . . .	15.28	1.66	984.7	0.061	0.278	0.710
"B" . . .	14.19	. . .	985.8	0.092	0.243	0.736
"C" . . .	10.68	1.32	986.3	0.048	0.323	Trace.

Showing that cholalic acid is one from one-third to one-



eighth of the cholesterine, while according to Hammerstein and others, normal bile contains twelve to thirteen times as much cholalic acid as cholesterine. It is also worthy of note that the mucin is only one-fourth the normal amount, showing that the mucous membrane of the gall-bladder was affected. The above analyses of Austin seem to prove conclusively that cholesterine gall-stones are the result of deficiency of glycochocolate acid.

It naturally suggests itself that the prophylaxis of gall-stones is the administration of sodium glycochocolate mass by the mouth, since it will then be absorbed from the intestine, entering the gall-bladder from the liver, and hold the cholesterine in solution. The question as to the possibility of dissolving gall-stones *in situ* has been investigated by Vaughan Harley and Wakely Barratt (*Journal of Physiology*, 1903). They inserted large gall-stones into the gall-bladder of healthy dogs, with antiseptic precautions, and found that in periods from six months to one year the gall-stones had entirely disappeared, showing that the healthy bile of the dog is capable of dissolving cholesterine stones. They also inserted gall-stones into the gall-bladders, and at the same time produced cholecystitis, with the result that the gall-stones remained unaltered. Unfortunately no analysis of the bile was made in these cases, but from the work of Herter and Wakeman and the analyses of Austin, it seems certain that in the cases where cholecystitis was produced there was a deficiency of bile acids, as in no other way is it possible to explain the solution of the stones in the normal bladder and their remaining undissolved when cholecystitis was present.

From the above experiments it is evident that by the administration of sodium glycochocolate mass it must be possible to dissolve gall-stones in the bladder, and even when cholecystitis is present sodium glycochocolate mass is indicated, not only as a prophylactic, but as a solvent for stones already present, and that in those cases only in which there is occlusion of the gall duct is surgical interference permissible.

## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, OCTOBER 8, 1907.

DR. JOHN R. WATHEN: These two specimens that I present to-night are two specimens of thyroid glands removed. The first goitre is from a woman about 42 years of age. She said that this growth had existed for over two years. It is of the fibro-cystic adenomatous type, and was full of a colloid material, as you see from the specimen. A good deal has been emptied out from the opening in the sac. It was much larger than it shows here. From the appearance of the neck it was about the size of an ordinary orange. The symptoms complained of were pressure, pain and nervousness, and those symptoms usually accompanying goitre. This was removed by the transverse incision made by Kocher and advocated by Mayo. To a certain extent I followed Kocher's method; that is, enucleation from the inside of the capsule.

Now, the other specimen is a very large exophthalmic goitre from a woman 19 years of age. She had complained of the trouble for two years. The growth was very rapid and very pronounced. It was the most pronounced I have ever seen. She had all the typical symptoms that usually accompany exophthalmic goitre. Her pulse was 172, but under the administration of atropine, strophanthus and the other usual remedies for this condition her pulse came down to 120, but never below that. It averaged 140 to 150. These are the most difficult cases to operate on of all the goitre type. This specimen is a very large and beautiful one of exophthalmic goitre. The technic of the operation is different from that of cystic goitre, and can hardly be classed in the same class of surgery. The exophthalmic goitre has taken a different position before pathologists and surgeons from what it used to hold. It is an increased secretion. It is the only gland we know of in the human body that is supposed to increase in function and size. Now, as to the question of the histology of these tumors, we notice very little colloid material as found in the normal glands and the cystic glands, but find a large amount of epithelial cells crowded together, with small spaces for colloid substance. It is a very active gland, and the symptoms produced, the exophthalmos, nervous symptoms, etc., are produced by the increased secretion of the gland.

As regards the surgery, when we operate on these glands we find that the vascular supply is not only increased and harder to overcome, but the capsule is thicker, more of an inflammatory type from the constant hyperæmia. We do not find a line of cleavage as we find in the cystic type. In the cystic type of goitre the blood supply is from the capillaries all around the goitre. No large vessels are encountered inside of the capsule. On the contrary in exophthalmic goitre we have the large blood vessels going right through the capsule, and we have no line of cleavage and we have to fight hemorrhage from necessity. These facts have been brought out lately by a number of our Americans, especially Halstead. He has come to the conclusion that injury to the parathyroids is followed by tetany in some cases. Why it should occur so frequently, when it only occurred in the work of Kocher four times in a thousand cases, we do not know. In this country in the work of Halstead and others the percentage is high. Why they injure the parathyroid I do not know. Halstead has written a great deal upon the surgery of the parathyroid. These are four little bodies situated near the superior and inferior thyroid arteries. The inferior thyroid artery supplies the parathyroids. Now the blood supply according to Halstead is a little artery that is a branch of the inferior thyroid. If you ligate the inferior thyroid artery you cut off the blood supply of the parathyroid which is followed by tetany. Notwithstanding these men, like Ballance, in England, who have reported many cases report no cases of tetany. They claim that the parathyroid is in the capsule.

This specimen shows beautifully the inferior arteries; in the other one of these cases it is not inevidence at all. Halstead says that only in two cases out of nineteen was it imbedded in the gland. It was imbedded in the capsule. In the work of Halstead the cases of tetany following the operation was one-half of one per cent. In the work of men like Kocher it is hardly worth mentioning.

The operation for exophthalmic goitre is a serious one, much more so than the operation for the relief of cystic goitre. My exophthalmic case was a fatal one; the other case got well. The reason I lost it was that it was simply an ugly case to deal with. I did not give the family any hope, because I knew that with the pulse of 172 there was little hope. She lived about three hours after the operation. She did not die from any direct cause. It was no hemorrhage but the pulse was high. She seemed to

rally fairly well. She was given salt solution and did well until she finally suddenly became blue. She died suddenly and unexpectedly.

The Græffe's symptom and Stelwagen's symptom were present. Now operation was the only hope; she was going from bad to worse and said she wished to be operated on. When these cases are seen early the mortality is low. The last ninety cases operated on by Albert Kocher had no mortality, and in the last three hundred cases the mortality was only three per cent.

DR. SATTERWHITE: I only wish to speak with regard to one point. Last summer a young girl about thirteen or fourteen years of age had a marked enlargement of the thyroid gland. Her father lived in Southern Kentucky,\* and was very much concerned about his daughter, and I rather gave him to understand that I did not think much could be done for her in hopes of alleviating her condition. I told him the only thing would be an operative procedure which at present I would not advise. He might consult other doctors. There was a preparation sent to me of iodon. I applied this to the girl's goitre and it entirely disappeared.

DR. MARSHALL: I enjoyed the report of the cases. I have not seen any operations on goitre myself. I think that surgery offers the best hope for these people. I have seen very small goitres followed with very pronounced symptoms. I now have charge of a lady who has marked heart symptom with a very small tumor, and there is a very slight prominence of the eyes. I remember in years gone by that when I was teaching at the College that the cases were put upon iodine preparations. We got benefit from that treatment in goitre of the exophthalmic variety, but of the simple variety we got no results, and we found in the latter cases that they did about the same with or without treatment. We would find them changing. When a woman would become pregnant the goitre would become larger. I think surgery is the hope for goitre.

DR. WM. H. WATHEN: The decision in favor of surgery for all forms of goitre that are causing any inconvenience from pressure or otherwise, except the exophthalmic variety or the variety that produces great heart disturbances or nervous disturbances has long since been so perfectly settled that the mortality has been shown to be almost nothing by the best operators. As remarked this evening the operative treatment for exophthalmic

goitre where there is a hypersecretion of the thyroid gland has not yet been settled in its entirety. It has been shown however that most of these cases can be cured if operated on sufficiently early. It has been shown further that many of them may be cured where they have existed for a considerable time by rest and the use of proper remedies, such as nutritious food digitalis, strychnine before operation. We can get them in a better condition by removing to a great extent the rapidity of the heart's action and the general nervous disturbance. Rest is the very best thing. Put your patients in bed, and sometimes a patient whose pulse is very rapid, who has marked exophthalmus and even intestinal disturbance which is found in these cases from time to time as a complication, will improve by this treatment so much that they will apparently get well. A patient came to me two years ago from Louisiana to be operated on. On this treatment the symptoms disappeared and I sent her home and she has had no symptoms since. The cure lies in the early operative treatment, in preparing the patient well for the operation and in the avoidance of injury of the parathyroids during the operation either by removal of the parathyroids or cutting off of their blood supply. If we do not touch the parathyroids but destroy all the nutrition of the parathyroids we have committed a sin just as great as if we had removed them. It is peculiar how Kocher in his past work had so few cases of tetany when he took out nearly all the capsule, when we find in the work of Halstead where he left much of the capsule with a parathyroid generally behind the capsule, that he had several cases of tetany. I certainly think that we ought to remove as little of the capsule as possible and never destroy the posterior part of it.

The first operation reported was a very simple one; the second was a trying one. I had the privilege of seeing the patient operated on and she was in a most deplorable condition. She was treated by doctors for several months and kept in the Hospital for a month hoping to get her in better condition. We thought an operation ought to be performed rather than let her go on in the condition that she was in. She insisted on having it done, preferring to die than have the condition as it was.

DR. J. R. WATHEN: I have very few remarks to make in closing. I admit that a certain percent will get well under the Iodine treatment. I believe that the operation is the cure for cystic goitre. A cystic goitre is much like an ovarian cyst. It does originate in the heart of the goitre like a cystic ovary. The



rest of the goitre is perfectly normal and for that reason we have a tumor formation. We know that internal remedies are of no use for a tumor of any organ.

DR. DABNEY: I have seen a number of young girls between the ages of twelve and fifteen years who had goitre. Usually all of them got well. I recall a number of cases of young girls having goitre and they invariably got well.

DR. J. R. WATHEN: According to the modern view of Beebe and McCullom we do not call these cases of goitre at all. There is simply a little hypersecretion. They have none of the histology that we find in exophthalmic goitre. There is only a physiological increase and it passes away under Iodine or other treatments. A real goitre has to be a cystic, sarcomatous or carcinatous goitre. This type is not a true goitre. Those yield to treatment beautifully. The patient that I reported accepted surgery as a last resort. We should not allow these patients to wait until they are ready to die.

DR. FLEXNER: What about Beebe's serum? He reports interesting cases.

DR. WATHEN: The Mayos have sent him forty goitres to make this serum. We know so little about this that it is hardly worth while to discuss it. Beebe asked me if any of the gentlemen in Louisville removed any goitres he would be obliged if they would send them to him to make this serum.

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### BLOOD PRESSURE IN THE EYE.

*(Discussion of Dr. Wm. Cheatham's Paper, read before the Clinical Society, March 19, 1907.)*

DR. FLEXNER: It is unnecessary to say that this is an interesting subject, as I had the pleasure of reading a paper on arteriosclerosis before this body, and I am particularly glad to learn the value of the ophthalmoscope as an early diagnostic means. There is one thing that I think the later studies of blood pressure have shown very distinctly, and that is, that there is a distinction between blood pressure due to arteriosclerosis and hypertension due to other causes. We have hypertension due to many causes of nervous origin largely, or due to the presence of toxins in the blood—toxines derived from the alimentary canal.

This young lady had an exceeding high tension, a hard feeling radial and an accentuated aortic second sound. I did not have an opportunity to make an examination of the urine. The

elderly lady had the highest blood pressure I have ever demonstrated, 260 millimeters. In addition to this high arterial tension the lady has an aortic systolic murmur, is passing large amounts of urine of high specific gravity containing albumen.

The point that Dr. Cheatham makes of the ophthalmoscope in the differentiation of arteriosclerosis is one of the most important points brought out before this Society. I think his suggestion that the ophthalmologist send his cases to the general doctor for treatment is a good one, and I think it is necessary for the general doctor to get the additional testimony that the ophthalmoscope can give in making a diagnosis.

In so far as the treatment is concerned, I want to say one thing in reference to the use of the nitrites. When I first began to make these investigations, following Janeway and others, I tried one nitrite after another. There was a sudden and pronounced drop of the pressure dependent upon the particular nitrite used. The only remedies that I have ever seen that produced positive effects—and effects which have some degree of duration to them—are the idodides. They are the best of all the arterial depressants and the results that the essayist has reported have been abundantly confirmed in my hands in the cases which I have seen. I asked the lady closely with reference to anginal pains. There were never any signs. It is a curious fact that she should not have them with the high pressure that she has. Of course, in angina, we have this high arterial tension going with it. It shows in these cases that the coronary arteries are not involved in the arteriosclerosis.

DR. DABNEY : Dr. Cheatham's paper is in line with a great deal of work being done and is very timely at present and is one that we listen to with a great deal of interest. Dr. Cheatham, and possibly a few other members of the Society, noticed an article in one of the journals a few months ago which went on to say that the oculist, in many cases of arteriosclerosis, was the first to warn the patient of his danger, and so many of these cases can be diagnosed early by the ophthalmoscope. It occurs to me that the weak point in the value of the ophthalmoscope as a means of diagnosis is that, so far as I am aware, statistics have not been collected to show in what proportion of cases the vessels of the eye are affected. In some hospitals where they have an opportunity to look it up I hope they will collect these statistics.

There are several clinical sides to the question that I thought

the doctor would touch upon. One is spasm of the retinal vessels. Perhaps Dr. Weidner can tell us why a sclerotic vessel is more apt to spasm. There are cases of arteriosclerosis associated with retinal spasm. I would like to mention a man of sixty-four who had glaucoma. An iridectomy was done but the sight was not restored. He subsequently saw Knapp. The diagnosis was confirmed and the treatment approved, but Knapp went on to say that the man had arteriosclerosis. He gave a specific history. This gentleman, lately, has pronounced blindness in the other eye. Of course we see arteriosclerosis in glaucoma and we know that glaucoma may depend on it. A Philadelphia oculist has reported some interesting cases along this line.

Dr. Cheatham's man with a vision of 20/30 I suppose was a case of retinal hemorrhage where the hemorrhage was absorbed. It is hard to say how much nature does and how much the iodides do in these cases of hemorrhage. I do not think they are very valuable.

Another interesting phase of the question is that bright's disease is not very rarely discovered by the oculist. I suppose every oculist has seen such cases. I think one of the most important points for the general practitioner is, that changes in the blood vessels of the eye very often occur with perfect sight. May have hemorrhage and arteriosclerosis. I think Dr. Cheatham's case was very remarkable, but frequently we may have hemorrhages and extensive arteriosclerosis with perfect sight. A gentleman from Florida came to see me last week; he was sixty years of age, a heavy-set fellow. He gave a history of having, in the past, had a stroke of paralysis, some years ago. He had been carefully examined by his physician, his urine analyzed, and at that time he was said to have no Bright's disease. He came to see me, stopping on his way North. He had lost the sight in one eye. The man had thrombosis of the retinal veins. A good many of these cases of so-called arteriosclerosis are thrombosis of the retinal veins. I asked him to see Dr. Flexner but I do not think he did. I feel that these cases should be put under the charge of a general practitioner.

DR. SAMUEL: What are the symptoms of spasm of the blood vessels?

DR. DABNEY: It is rarely observed. A man in Philadelphia observed it.

DR. SAMUEL: I am not going to discuss the paper. I thank

Dr. Cheatham for the presentation of the subject. I enjoyed it much indeed.

DR. WEIDNER: I enjoyed the paper much. We are surrounded continually by dangers. We know that, and I believe we ought to draw a lesson from this. We should prevent trouble as much as possible. We treat disease too late. It is prophylaxis that we have to figure in the cure of these troubles. We should live the simple life.

Dr. Cheatham has named the causes that produce these various changes in the vessels. The cause is often something that we cannot protect ourselves against. The grippe that is circulating among us now is one of the dangers in producing vascular changes. The same is true of all infections. Most all of the infections are dangerous. How can we protect ourselves against them? As medical men I think we should protect ourselves against exposure, overwork and also overeating. I think the more we live upon a vegetable diet the less would we be prone to have this condition. I believe that it is due to the abundant amount of proteid matter taken by the American people. I believe that we introduce too much coal into the stove and we have to draw slack in consequence, and the effect will show on the vessels. A vegetable diet increases the alkalinity of the blood.

We must at last fall back on the iodides. I believe that we have neglected the use of the ophthalmoscope which, in the hands of the specialist, can detect the changes in the vessels of the eye before we are able to make out the urinary changes in many cases. With the aid of the ophthalmoscope we can detect these changes early.

DR. THOMPSON: I have enjoyed this meeting very much, especially Dr. Cheatham's paper and the discussions afterward, especially Dr. Flexner's and Dr. Dabney's.

Dr. Samuel asked about spasm of the blood vessels. I think that spasm is one of the things that we get in arteriosclerosis, especially spasm of the coronary and splanchnic vessels causing pain in these regions. Spasm often draws attention first to disease of these arteries.

You asked about statistics. These have been brought out pretty well in Dr. Brooks' paper. In 368 cases he gives the statistics of the different vessels involved. Where the ophthalmoscope shows thickend, irregular vessels we can make a positive diagnosis, but the vessels of the eye are involved in only a small proportion of early cases. The poisons seem to have a selective

effect in the system, just as lead affects certain nerves. The different poisons affect different arteries in different parts of the body.

The doctor spoke of cases where the arterial tension was low at the beginning of the disease. We have found that in arteriosclerosis in a tubercular patient we may have low blood pressure, and where a patient had a high blood pressure owing to arteriosclerosis, afterwards becoming tubercular, the pressure fell greatly.

The doctor referred to the lowering of blood pressure in the treatment. Now, this high arterial tension is a bad symptom in some cases. If the average blood pressure rise to 250 or 260 mm. it is cause for fear. The nitrites, the iodides, and the mercurials are the best treatment. The other treatment is the quiet life, rest as much as possible, outdoor exercise, avoiding fatigue, and a vegetable diet. An animal diet, especially red meats or anything throwing stress on the kidney where the kidney is not able to excrete the poisons, would be bad. One point is that too much fluids is not good for these patients. They are sometimes put on an exclusive milk diet. If we increase the volume of the blood we increase the tension. Probably a dry diet would be better in those cases.

DR. FLEXNER: Have you not seen spasm of the blood vessels that you could almost make out in the radial?

DR. THOMPSON: Yes, but I like to watch those cases afterwards. I have seen cases in connection with the abdominal rather than in connection with the cerebral arterial system.

DR. CHEATHAM: I just want to put this case on record. This man was forty-three. His loss of vision probably did not depend upon the arteriosclerosis.



# THE American Practitioner and News.

“NEC TENUI PENNĀ.”

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## Editorial.

*The Specialist in Medicine.* Specialism seems to be the trend now a days in medicine. Those of us who teach in the medical schools hear our students discussing their specialty even before they graduate. Recent graduates in medicine are often given this advice by a well informed, well meaning representative of the general public. “Oh! don’t do a general practice, it is too hard. Take up a specialty, be a specialist, that is the thing.” This state of affairs makes us put on our thinking cap. What is the matter? Where is the trouble? Is the family doctor to be relegated to the back ground? Time was when the family doctor was one of the foremost citizens of the community. Loved, respected and even revered by all, from the double standpoint of professional ability and personal worth. Is he to be removed from this position of honor and trust? Will his species become extinct, and will he be labeled as a curio, like a fossil of bygone ages, or is he kindly to be permitted to remain in the harmless and inoffensive capacity of distributing agent for the specialists? Sending one to the gynecologist, another to the dermatologist, another to the proctologist, another to the otologist, and so on adinfinitum. Young poorly pre-

pared men attracted by the possibilities of reputation and income, rush precipitately and indiscriminately into specialties. Such men must necessarily have a narrow view of diseased conditions in general. They see everything from the standpoint of their specialty. All symptoms point in that direction. They fail to realize (or they never knew) the inter-dependence and the inter-relation that exists between the various organs and functions of the body. To illustrate: A young medical student of twenty years felt ill, he had some fever, coated tongue, loss of appetite, pain across the loins and some headache. His urine was red and scanty, he had only been feeling badly about two or three days and had not gone to bed. He consulted his favorite who happened to be a genito-urinary specialist. The specialist got a specimen of his urine, found albumen, some blood elements and a cast or so, and forthwith told the boy that, "It looked like a grave kidney lesion, possibly a type of Bright's disease." The boy went home and to bed, his headache increased. The next afternoon he promptly broke out with measles.

The family doctor laughed at the specialist, well knowing that the urinary findings in the case might crop up in the incipient stages of anyone of a dozen different infectious diseases. Ofttimes the honest, sincere, general practitioner plodding along in the even tenor of his way is confronted by this picture. Dr. X., an electrical specialist blows into town, fashionably dressed, suave and smooth; he engages a whole suite of rooms in a prominent locality; he requires the services of a nurse and a stenographer; he has an X-ray room, a vibratory room, a static room, a high-frequency room, etc. You have to make an appointment to see him. "Verily he hath his reward," but the general practitioner will be successfully practicing medicine when the above mentioned gentleman is gone and forgotten. We have no quarrel with specialism. Specialists are here to stay. They do good work. Work that the general practitioner cannot do. We are speaking of the ill advice, poorly prepared, wet diploma brand of specialist. Personally, I do not believe that any man does really the best work as

a specialist (no matter what his capabilities or opportunities) by entering a specialty on graduation. He should do a general practice for some years, and see all phases of medicine. Then, as adaptability and especial fitness for handling certain classes of cases developes, he should round out into a specialist. Certain it is, that this type would be the ideal specialist. The crying need is not for more specialists, but for more *first-class general practitioners*. Not for more men who are in possession of a medical diploma, (we have enough of them already), but for more really good doctors. Do not be deceived or misled by the brilliant though temporary success of the men around you along certain lines, but keep plodding along, working and studying all the while. The family doctor will be here as long as the family is here, and if he ever loses his grip on the people, or his position of trust and honor, it will be his own fault. He is the fellow who really does the work; he is the private in this great army. "The man behind the gun," the very bone and sinew of the medical profession.

Many of the great discoveries and advances in medicine were made by men who are or were for some years general practitioners. And while we are on this subject, I shall take occasion to say that if I were offering any gratuitous advice to the oncoming generation of medical men, it would be this: Make yourselves masters of the subjects of physical diagnosis and therapeutics, and thus become competent specialists in the greatest of all specialties—*general practice*.

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#### NOTES AND PERSONALS.

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Dr. J. M. Ray and Dr. I. A. Lederman have removed to Suite 300-8, Atherton Building. Hours, 9 to 1.

We have received a copy of the transactions of the Swedish Association against tuberculosis.

The Governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will give a ninth series of

clinical lectures on diseases of the skin in the out-patient hall of the hospital on Wednesday afternoons from November 6th to December 18th, 1907, at 4:15 o'clock. The course will be free to the medical profession. WM. C. WITTER, Chairman of the Executive Committee.

The first annual meeting of the American Physio-Therapeutic Association will be held at French Lick Springs, Ind., (one of the World's famous watering places), Dec. 5th, 6th and 7th, '07. Kindly send title of your paper to the Secretary, Dr. Otto Juettner, 628 Elm St., Cincinnati, O. For information pertaining to the meeting-place and accommodations, address Dr. J. D. Kahlo French Lick, Ind.

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## Recent Progress in Medical Science.

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### GENITO-URINARY AND SKIN.

IN CHARGE OF

H. H. KOEHLER, M. D.,

LOUISVILLE, KY.

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In the August number of the *American Journal of Urology*, Bodin, of Lyons, gave out the details of the origin of the infectious arthritides of urinary origin. More and more we come to realize the multitudinous causes of joint affection. In this article the author enumerates various organs naturally inhabiting the urethra capable of at times setting up a pyemic condition. The role that gonococcus plays in synorrial infections is too well known to dwell upon, but the equally important role of the colon bacillus is worth inquiring into. Catheterism and manipulation of the urethra are often attended by unexpected and sometimes alarming sequela in the form of septic fever. Such fever, as Guyon says, can be produced by the will of the surgeon, mainly by unskillful and prolonged manipulation.

The cause is, of course, the damaging of the mucosa, permitting the ingress of pathogenic bacteria. It can readily be seen the colon bacillus, by its close proximity to the genital, is an ever present menace. It seems a well established fact that most arthritides of urethral origin are colon infections. The practical part of the author's investigation is that urinary antisepsis is always most urgently indicated.

In the June number of the same journal Dr. Henri Juy, of Paris, discusses the treatment of infectious pyelonephritides. The article is an interesting one to the general practitioner, as he acknowledges the value of medicinal and hygienic measures, although according full value to operative procedures.

A patient with a kidney suspected of harboring pus should be put to rest in bed in a horizontal position. This frequently diminishes the pain, and reduces the frequency of urination. The best food is milk, given in fractional doses. Later, we may allow white meat, fish and vegetables. Dark meat, spices and alcohol are to be interdicted. Any urethral or prostatic inflammation, particularly stricture, should receive the proper local treatment.

Prof. Robin has great faith in the treatment of these conditions with balsamic medication. His choices are first benzoic acid and the benzoate of soda, from 1 to 4 grains in 24 hours. Turpentine and balsam of tolu are also of value. He gives the following prescription :

R̄ Syrup tolutan . . . 300.00.  
Sodii benzoat . . . 14.00. M.

Of this a tablespoonful is given in a cup of infusion of uva ursi several times daily.

After the acute symptoms are over, the old friend of the laity may be used, Harlem oil. Salol is much used and with benefit, but the drug above all others is urotropin in doses of 1½ to 2 grains a day. A recent modification of urotropin is herlmithol, which seems to be less irritating and more antiseptic.

A point well to bear in mind and constantly overlooked is that we do not aim at alkalinity of the urine in infected conditions, but at acidity ; consequently the giving of alkaline waters is contraindicated.

Regarding surgery, he quotes Guyon, that a kidney is to be preserved as much as possible. Consequently, he prefers early nephrostomy to nephrectomy.

\* In a paper read before the American Urological Association at Boston, Dr. Arthur L. Chute, of that city, presents the subject of "Hematuria of Chronic Nephritis." The paper is a plea for the surgeon's side, claiming that many such cases are benefited by operative measures. He recognizes the fact that many kidneys that have been the seat of persistent bleeding presented no gross departure from the normal in appearance.



These are the cases which the internists call "essential hematuria," "renal hemophilia," "angia-neurotic," bleeding or even "neuralgic hematuria." This is mere word juggling. Reasoning investigators were forced to conclude that the bleeding had a histological cause, some tissue anomaly that allowed the escape of blood.

It has been found that these kidneys are really infected organs, the nephritis being of an ascending type and unilateral. Confusion and opposition has arisen by the use of the name Bright's disease, by which the internists understand a bilateral nephritis of toxic origin, to which he justly objects the application of surgery. The use of the cystoscope will, however, clear up the question as to the source of bleeding.

If unilateral, the author claims the case for the surgeon, summing up his conclusion as follows, which I venture to quote in his own words :

"One may see in cases of chronic nephritis renal hematurias. Some are slight, others produce great debility by their long duration, or even threaten life by their profuseness. To this class probably belong many of the so-called 'essential renal hematurias.' These hematurias may have as their underlying cause a nephritis of either toxic or infectious origin. A nephritis of infectious origin is unlike a toxic nephritis, in that it may be limited to one kidney or part of it. Though many cases do not give a distinctive clinical picture, a diagnosis can probably be made in a considerable proportion of them. A recognition of the hematuria of chronic nephritis is important, that the condition may not be confused with a more serious renal lesion, and a kidney be unnecessarily sacrificed.

"Under operative treatment a considerable proportion of these cases have recovered. Our knowledge of the condition is not sufficient to allow one to formulate definite rules as to the best operative procedure in each instance. There are not at present a sufficient number of carefully reported cases to allow one to compile useful statistics. Careful observation of similar cases as they arise, combined with a thorough bacteriological study of the urine, as well as of the microscopic pathology of the kidney, will doubtless do much to clear up many points that are at present in doubt."

At the same meeting Dr. Douglas H. Stewart discusses the symptomatology of ureteral diseases. Owing to their secure position, ureteral diseases are nearly always of a secondary nature,

the infection came either from below or above. Ureteritis often being a complication it is frequently overlooked, being overshadowed by other symptoms. The diagnosis is the best made with the cystoscope, aided by the work of an expert microscopist. Of the symptoms the most common one is pain which often radiates down into the bladder and testicle. Differences in the quantity of urine voided is highly significant. If the quantity remains constant and ureteral symptoms are present then the inflammation is an ascending one—of cystitic or gonorrhæal origin.

However if the quantity undergoes great fluctuations then the condition is most likely an obstructive one, due to calculi or to a hydronephrosis. Tenderness along the ureter with no history of calculi is strongly suspicious of being due to gonorrhæal infection. Right sided ureteritis may be mistaken, for appendicitis is most likely to be more diffuse and muscle rigidity associated with it, which is absent in ureteritis.

In the August number of the *Journal of Cutaneous Diseases*, Dr. Joseph Zeisler, of Chicago, gives his views regarding the present status of the X-rays. As every one knows the original enthusiasm has died out, and the use of the rays are now restricted to a very limited field, and their action is usually supplemented by other remedial measures, either local or constitutional.

Zeisler's views are more or less pessimistic. The danger of inflicting harm must always be borne in mind, and a damage suit may result unexpectedly. Relapses of epithelioma and psoriasis are frequent after the use of the rays, and to treat epitheliomata of any consequence, such as are situated on the lip or tongue by any other means than through surgical ones, is paramount to a crime.

Zeisler deplors justly the ready use made of the X-rays in dermatology by practitioners, densely ignorant in diagnosis of skin diseases.

This has created a class of would be dermatologists whose existence is a danger to the legitimate class. To this I would add the use of such psychical frauds as the high tension current and the ultra violet light, so impressive in the office work of many charlatans.

## BOOK REVIEWS.

CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION. —By Prof. Edmund von Neusser, M. D., Professor of the Second Medical Clinic, Vienna; Associate Editor Nothnagle's Practice of Medicine, Authorized English Translation by Andrew McFarlane, M. D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College; Attending Physician to St. Peter's and Child's Hospital and Albany Hospital for Incurables. Part I. Dyspnea and Cyanosis. E. B. Treat & Co., New York, 1907. Price, \$1.50.

As this is one of the most interesting pieces of literature it has been my fortune to review, I hesitate to express my true opinion, for I feel that I might be over enthusiastic. The disorders of respiration and circulation are taken up in such a systematic manner, and each dealt with from a histologic, physiologic and pathologic standpoint, that one is charmed with its completeness. Every paragraph is to the point, and no time is wasted in introducing the subjects.

The chapter on conditions which induce dyspnea goes into detail as to the causative factors and how they act, as deficiency of oxygen as compared with excess of  $\text{CO}_2$ , affecting the respiratory center. Dyspnea without cyanosis, dyspnea with cyanosis. The absence of dyspnea and cyanosis in respiratory disturbances and cyanosis without dyspnea are dealt with in a most interesting and scientific manner.

The second chapter is devoted to dyspnea and cyanosis in diseases of the respiratory tract, pathological conditions of nose and pharynx, laryngeal affections, diseases of trachea, goitre, affections of bronchi, pertussis, capillary bronchitis, pneumonia, hyperemia and edema of lungs, emphysema, etc.

Part IV deals with dyspnea and cyanosis in congenital cardiac defects, in acquired cardiac lesions, in vascular lesions, in neurosis of the heart, in diseases of gastro-intestinal tract, in infectious diseases, dyspnea due to poison, dyspnea in general diseases—such as Bright's, diabetes, anemia, leukemia, hysteria, cerebral and muscular lesions, and concludes with therapy of dyspnea. I consider the book one of the most timely and valuable pieces of literature that has been presented to the profession for some time. It is interesting, well written and scientific, and no medical man without the clinical experience of Prof. von Nuesser could compile so many scientific facts in two hundred pages. The book is well worth a place in the library of every practitioner and diagnostician.

E. S. ALLEN.

MANUAL OF ANATOMY, SYSTEMATIC AND PRACTICAL, including Embryology.—By A. M. Buchanan, M. A., M. D., C. M., F. F. P. S. Glas., Professor of Anatomy in Anderson College, Glasgow; Examiner in Anatomy for the triple qualification of the Scottish Bodies; Examiner in Anatomy and in Physiology for the Dental Diploma, and Examiner in Anatomy (human and comparative) for the Fellowship of the Faculty of Physicians and Surgeons of Glasgow; Ex-examiner in Anatomy to the University of Glasgow; formerly Senior Demonstrator of Anatomy in the University of Glasgow, etc. Vol. II: Abdomen, Thorax, Head and Neck, Nervous System, Organs of Special Sense, and an appendix containing the *Bale Nomenclature* and Glossary. With 363 illustrations, mostly original and in colors. Chicago: W. T. Keener & Co., 90, Wabash Ave. 1907.

This is one of the most conveniently arranged works on diagnosis I have examined. The classifications of regional anatomy, the topographical outlines of the thorax and abdomen are so as to simplify the student's work.

The entire area of the trunk has been divided into surfaces, and these surfaces subdivided into regions by imaginary lines and surface prominences.

The X-ray cuts of the lungs filled with shot must impress the student as to their relation. The colored lines marking the location of different organs makes clear relational anatomy.

Part II deals with the respiratory system from a standpoint of inspection, palpation, percussion, auscultation and diagnosis of diseases of the respiratory tract. The chapter on inspection goes into detail as to the method of inspection, such as complete exposure where possible, the different position, and the arrangement of the light. The normal chest is considered, and then the pathological chest is compared.

The barrel chest, perygoid chest, the rachitic chest, unilateral enlargement and diminution and local bulging and depression show how much detail is gone into in this chapter. Respiratory movements inspected under different conditions, especially with reference to different heart lesions.

Chapter II is devoted to palpation, a systematic and methodical manner is discussed as to palpation, size, shape and symmetry considered, and the effect of respiratory movements. Percussion is discussed with an equal degree of thoroughness, and the cuts explaining conditions influencing percussion are good.

A great deal of space is devoted to auscultation and conditions influencing it. The cuts demonstrate clearly the physical reasons as laid down in the text as influencing auscultation, and will be of advantage to the student.

The latter part of this work discusses in detail cardiac and pericardiac affections and their differential diagnosis. The X-ray cuts are of great assistance in explaining the text. I can't

imagine a more compact, conveniently arranged text book for the student or physician who wishes to familiarize himself with the chest and abdomen, and the pathological conditions developing in them.

A TEXT BOOK OF THE PRACTICE OF MEDICINE, for Students and Practitioners.—By James Magoffin French, A. M., M. D. Third Revised Edition. Octavo, 1276 pages, illustrated by numerous engravings in the text and by twenty-five full page plates by chromo-lithography, photogravure, chromotype, etc. Muslin, \$5.50 net; leather, \$6.50 net. New York: Wm. Wood & Co.

The new third edition of French's "Practice of Medicine" has just reached us. The book has been enlarged, thoroughly revised and rewritten in great part. The book is now up to date in every respect, and will take its legitimate place as a text book for teachers, general practitioners and students. It is profusely and appropriately illustrated.

The various subjects are brought up to date. The clean, clear-cut "style" of the author commends itself to all. The author purposely avoids cumbersome histories and all extraneous material.

Part I, on "The Principles of Medicine," is, we believe, particularly worthy of attention. It treats of highly important subjects—subjects that are not taken up by the general run of single text books on practice. These topics are so treated that the student gains the clearest possible conception of the subject under consideration. The book stands for science without parade; comprehension without curtailment; knowledge without verbosity. We gladly speak a good word for the book, and predict for it a deservedly wide circulation.

THE PRACTICAL MEDICINE SERIES, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. II. General Surgery, edited by John B. Murphy, A. M., M. D., LL.D., Professor of Surgery in Rush Medical College (in affiliation with the University of Chicago). Series 1907. Chicago: The Year Book Publishers, 40 Dearborn street.

Volume II on general surgery of "The Practical Medicine Series," by Dr. John B. Murphy, deals with surgery as we have it to-day. The live subjects, as serum therapy, the opsonic index theory, the role of the phagocyte, are considered in detail.

The chapter on anesthesia is a most practical one, in that the different anesthetics are taken up and discussed as to their comparative merits. The chapter is subdivided into analgesics, general anesthesia, local complications, local anesthesia, scopolamine-morphine, spinal and stovaine anesthesia.



The next chapter is devoted to the X-ray and X-ray therapy. A chapter gives cuts of the new instruments and their relative value. Operative technic is taken up and discussed in a most interesting way as to the manner of disinfection, also the relative sensibility of the tissues and shock, how and when to deal with it.

The chapter on wound healing and pathological interventions is interesting, especially as it discusses in detail the different agencies that retard and interfere with the perfect repair of wounds.

Tetanus, actinomycosis, anthrax, burns, tumors and the different sera treatment of the malignant new growths.

Every pathological condition of interest is discussed, and the latest ideas as to their cause and treatment.

This volume of the Year Book Series brings fresh to us the ideas and opinions of our best thinkers, and saves the trouble of wading through pages of text books too voluminous for the busy man.

**MATERIA MEDICA AND THERAPEUTICS.**—(BLAIR.)—A Practitioner's Handbook of Materia Medica and Therapeutics, based upon established physiological actions and the indications in small doses. To which is added some pharmaceutical data and the most important therapeutic developments of sectarian medicine, as explained along rational lines. By Thomas S. Blair, M. D., Member American Medical Association, Pennsylvania State Medical Society, Harrisburg Academy of Medicine; Member Visiting Staff of Harrisburg City Hospital, etc. Published by The Medical Council, 4105 Walnut street, Philadelphia, Pa.

This handy manual is conveniently divided in two parts: Part I—Pharmacy. Part II—Materia Medica and Therapeutics. Part I is quite brief, leaving the main part of the book to Materia Medica and Therapeutics. The latter is arranged alphabetically, both as to drugs proper and therapeutic significance. The chief merit of the book is its suggestions, particularly in the matter of the most efficient preparation of the individual drugs.

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### BOOKS AND PAMPHLETS RECEIVED.

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**THE GENERAL PRACTITIONER** in relation to Specialism with special reference to Ophthalmology. By H. H. Briggs, M. A. M. D., Asheville, N. C. Read before the North Carolina State Medical Society, June 4, 1903. Reprint.

**THIRTY-THIRD ANNUAL REPORT** of the Medical Director of the Cincinnati Sanitarium for the year ending November 30, 1906.

- BY-LAWS AND REGULATIONS covering and concerning the Charitable Institutions of Kentucky. Prepared by Kentucky State Board of Control for Charitable Institutions.
- OBSTRUCTIONS TO THE UPPER RESPIRATORY TRACT—By H. H. Briggs, M. A. M. D., Asheville, N. C. Read at meeting of the North Carolina State Medical Society, held at Charlotte, N. C., May 28-30, 1906. Reprint.
- THE EARLY MANIFESTATIONS OF LARYNGEAL TUBERCULOSIS Their frequency and treatment—by H. H. Briggs, Asheville, N. C. Read before the Fifty-fourth Annual Session of the American Medical Association in the section on Laryngology and Otology. Reprint.
- UNITED STATES DEPARTMENT OF AGRICULTURE—Bureau of Biological Survey Circular No. 59. C. Hart Merriam, chief of Bureau, May 3, 1907.
- A REVIEW OF THE OPSONINS AND BACTERIAL VACCINES—By E. M. Houghton, Ph. G., M. D. Junior Director, Biological Laboratories, Parke, Davis & Co., special lecturer in Medical Department, University of Michigan.
- THE BULLETIN of the University of Nebraska College of Medicine, April 1907. Series XII No. 2.
- REPORT OF THE POSTAL COMMISSION (59th Congress, Second Session). Authorized by Congress to make inquiry regarding Second-Class mail matter by the American Weekly Publishers Association. W. D. Boyce, President. Chicago, Ills., March 1907.
- WHAT CAN THE ORGANIZED MEDICAL PROFESSION DO TO AID IN THE SUPPRESSION OF QUACKERY?—By Henry W. Cattell, A. M. M. D., Philadelphia, Pa. Reprinted from the Bulletin of the American Academy of Medicine April, 1907.
- MEDICAL NOTES AND QUERIES—Edited by Henry W. Cattell, A. M. M. D., of Philadelphia, U. S. A.
- STATE OF TENNESSEE—Department of Game, Fish and Forestry. Joseph H. Acklen, State Warden, Nashville, Tenn. Game, Fish and Forestry Laws of the State of Tennessee. Including an Act for the Protection of non-game Birds, and notes by the State Warden. 1907-1908.
- NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS—Constitution and By-Laws. List of members. January 1907.

A CLINICAL STUDY OF TWO HUNDRED AND NINETY-THREE CASES OF PULMONARY TUBERCULOSIS—Treated at Winyah Sanitarium, Asheville, N. C., in 1905 and 1906 with special reference to specific medication and its results by Karl von Ruck, M. D., and Silvio von Ruck, M. D. Asheville, N. C. 1907.

DIPHTHERIA—Its prevention, restriction and suppression issued by the Illinois State Board of Health 1907. Revised Edition.

ABSTRACTS OF A YEAR'S CONTRIBUTIONS to Internal Medicine (From March 1st, 1906 to March 1st, 1907) by G. W. McCaskey, M. D., Professor of Medicine and Clinical Medicine, Purdue University; Physician to Hope Hospital, Fort Wayne, Ind.

OBSTETRICS—By E. S. McKee, M. D., Cincinnati, Ohio. Reprinted from the Medical Bulletin, January 1907.

PROSTATECTOMY IN TWO STAGES—A conservative operation with minimum hazard. By Charles H. Chestwood, M. D., of New York. Professor of Genito-Urinary Surgery in the New York Polyclinic Medical School and Hospital; Attending Surgeon, Bellevue Hospital. Reprint from Annals of Surgery.

THE CERVIX UTERI—Before, during and after labor. A. Ernest Gallant, M. D., New York. Reprint from November number Vol. XIX. Annals of Gynecology and Pediatrics. Boston 1906.

CIRCULAR OF INFORMATION, MCCORMICK NEUROLOGICAL COLLEGE—Established 1893. The first Non-Sectarian Medical School in the world. Incorporated under the laws of Illinois. A drugless system of practice consistent with nature. Not a "pathy," "ism" or "ic." Under graduate course six months. Post graduate course two months. Course in Ophthalmology two months. Chicago.

SOME REMARKS ON PROSTATIC HYPERTROPHY—By Charles H. Chetwood, M. D., Professor Genito-Urinary Surgery, New York Polyclinic Medical School and Hospital; visiting surgeon, Bellevue Hospital; consulting surgeon, St. John's Hospital. Reprint.

ENDOTHELIOMA OF THE OVARY — With a report of a case of Hemangio-Endothelioma Perivascularis, by Channing W. Barrett, M. D., Chicago. Reprint from Surgery, Gynecology and Obstetrics, Vol. IV, No. 5, Pages 549-573, May 1907.

# THE American Practitioner and News.

"NEC TENUI PENNĀ."

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"Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else." —RUSKIN.

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## Original Communications:

### DIAGNOSIS AND TREATMENT OF TUBERCULOSIS OF THE KIDNEY.\*

BY J. M. MORRIS, M. D.,  
LOUISVILLE, KY.

THE seeming neglect on the part of a very large per cent. of the medical profession of the study of this important subject has lead me to write this paper, and not until I had entered into an investigation of this matter, did I realize its full importance. In the year 1833, Ammor described somewhat clearly the clinical aspects of this disease but gave no information worthy of notice relative to its treatment. Ebstein reviewed the subject somewhat exhaustively in 1877, in Zeissman's Encyclopedia, describing the disease as that of cheesy condition, involving the kidney and ureters, being very hard to diagnose, with very little light relative to treatment and no hope of recovery. In 1884, Henry Morris described this condition under two distinct titles, "Tuberculous Disease of the Kidney," and "Scrofuloud Disease of the Kidney." He advised that the treatment consisted in building up the general condition of the patient. He believed the condition to be only a local manifestation of a general constitutional disorder and that the removal of the kidney would be useless. In 1885, Samuel W. Gross read a paper before the American Surgical

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\* Read before the Louisville Clinical Society, October 22, 1907.

Association on the subject of nephrectomy. He had collected twenty cases from literature in which the operation had been done for so-called strumous kidney, the results being twelve recoveries and eight deaths—a very satisfactory mortality I should say at that early time.

On analysis of these cases it was found that in sixty-five per cent. only one kidney was involved, and that in all cases in which previous nephrotomy had been done no relief had been derived. He therefore advised early nephrectomy in all cases where only one kidney was involved.

In 1885, H. Fisher stated in the German Congress of Surgeons that all extensive operative procedure for tuberculosis of the kidney, especially nephrectomy, should be condemned. In 1891, Madelung collected sixty cases of nephrectomy for tuberculosis of the kidney from literature and reported three cases of his own. Eleven died from operation and five within five months after operation. He concludes that the operation is indicated when the disease can be proved beyond doubt to involve only one kidney. In 1902, Tupper reported twenty-five cases of nephrectomy for renal tuberculosis with forty-seven and eight-tenths mortality and only two definite cures; and fifty-seven nephrectomies with eleven abdominal operations, with thirty-six and three-tenths mortality; and forty-six lumbar operations with twenty-eight and two-tenths per cent. mortality.

Dr. Willy Meyer read a paper before the Medical Society of New York, in 1896, in which he emphasized the fact that renal tuberculosis is almost always unilateral at first and that it frequently descends to the bladder later. He advises the great necessity of early diagnosis of the disease and removal of the kidney before the disease has spread to other organs of the body.

Erichsen in his volume of surgery, in 1885, says relative to tuberculosis of the kidney, "The diagnosis is extremely difficult until the enlarged kidney can be made out, and that the treatment is a matter of considerable doubt." "When abscess forms early nephrotomy gives great relief and certainly prolongs life; but should nephrectomy ever



be performed for this disease? In the early stages the diagnosis is so uncertain, even after examination by exploration, that it can scarcely ever be justified to remove the organ. In the latter stages where both kidneys are involved, as is almost universally the case, operation would be both useless and harmful."

Loomis says in his work on general medicine, in 1892, that "Tubercles are developed in the kidney as an advanced lesion of general tuberculosis; that primary tuberculosis of the kidney is occasionally met with in young children. In the adult it occurs more often in men than in women. The right kidney is oftener affected than the left. Prognosis very unfavorable. Complications are tuberculosis in any or all other organs of the body—cystitis, pyelitis, pyelo-nephritis, hydro- and pyelo-nephrosis, waxy kidney, peritonitis and urinary suppression." As to treatment, he says it is altogether palliative.

In 1897, in a monograph on tuberculosis of the genito-urinary organs, Senn advocates nephrectomy, but dwells on the great difficulty of early diagnosis. Further he says, "Owing to uncertainty of diagnosis during the early stages of the disease, and the existence of incurable complications in fifty per cent. of all the cases, that surgical treatment has not yielded as many permanent results as had at first been hoped for." He pleads for early diagnosis and early surgical interference.

Ramsey, of Baltimore, in 1900, published in the *Annals of Surgery*, an article on Renal Tuberculosis, giving statistics bearing on 304 cases in which some form of operative treatment had been followed. Of these cases, fifty-five nephrectomies had been done, with fifteen deaths within one month of the operation and only four permanent cures. Of 191 primary nephrectomies there were 106 permanent cures; thirty-one were improved; thirty-seven died within one month, and seventeen died later than one month after operation.

Israel published his great monograph in 1901, in which he reported the kidney cases which had been handled in his clinic. Surgically he reported thirty-one cases of tuber-

culosis operated upon. Nephrectomy was done in twenty-eight cases; nephrotomy in two; resection of the kidney in one. But I fail to get his results.

In 1903, Kroelin reported to some extent the kidney work done in Hamburg. Among these are thirty-four cases of tuberculosis of the kidney; thirty nephrectomies with twenty-seven per cent. recoveries, and four nephrotomies with two improved and two deaths. In 1904, Kroelin reported on kidney work done in his own clinic. He operated on thirty-nine cases of tuberculosis; did thirty-four nephrectomies; two nephrotomies, and opened perinephritic abscesses three times. He regards nephrectomy for tuberculosis of the kidney when limited to only one organ as one of the most satisfactory operations in surgery.

It is the intention of the writer in this brief paper to show that the knowledge and treatment of tuberculosis of the kidney has completely changed within the last twenty years; that it is a very common disease, much more so than thought to be by the majority of the profession at the present time; that it is not so exceedingly difficult of diagnosis as formerly believed and that it is thoroughly curable; that the infection gains entrance through the circulation, and that ninety per cent. or more of the cases are primarily confined to one kidney. Knowing these facts to be incontrovertible we must place the responsibility of success or failure of saving the patient's life or losing it, equally upon the physician and surgeon—upon the physician first in diagnosing the disease early, and upon the surgeon secondly in early operation. There was a time when the handling of renal tuberculosis was entirely medical, but that time has forever passed and is now classed with many other harmful fallacies in medicine, and has changed right about and become purely surgical when the disease is recognized early as it should always be.

I trust I may be pardoned for referring briefly to genito-urinary tuberculosis in general before discussing renal tuberculosis especially. Tuberculosis of the genito-urinary tract almost universally begins at one of four points—the

kidney, prostate, epididymis or tubes. Much new evidence has been obtained within the last ten years relative to diagnosis and treatment of genito-urinary tuberculosis. Most important of these methods of diagnosis are the use of the cystoscope, catheterization of the ureters, and better knowledge of the methods of examining the urine. Tuberculosis of the bladder is seldom primary, but is usually secondary to tuberculosis of the kidney, prostate or epididymis. The treatment of tuberculosis of the bladder is not as satisfactory as we would desire but much more so than formerly; local medication being possible and even practicable, the application of nitrate of silver to the tuberculous patches having been practiced by several genito-urinary men in the last several years. It was formerly believed that tuberculosis of the prostate was very rare or did not occur at all, but later research has proved the contrary to be true and that it is often affected primarily. So also of the epididymis and tubes, both being frequently the seat of primary tuberculosis. Tuberculosis of the kidney is far more common than was formerly believed. It occurs at all ages but is most common between the ages of twenty and forty. Statistics show that women are oftener affected than men, the ratio being about two to one. The symptoms of renal tuberculosis vary greatly in different cases—some cases run a silent course and give rise to very few symptoms until very late in the course of the disease. One of the most common symptoms is frequent micturition—this frequency not being very marked as a rule but the patient will notice a somewhat frequent desire to urinate. Pus and blood in the urine are symptoms of great importance. Blood does not occur in all cases, perhaps not in more than thirty to fifty per cent., and sometimes it occurs in very large amounts. Most frequently, however, it occurs in very small quantities, frequently being microscopic. The urine is frequently cloudy, pus occurs in varying amounts, but is usually present, and when extending over a long period of time should always excite suspicion of the disease. A slight elevation of temperature occurs in a considerable proportion of cases, especially when the

disease has continued for a considerable length of time. In well-marked cases, as in tuberculosis elsewhere in the body, grave symptoms occur, such as anemia, loss of flesh and strength, and a general debilitated condition. A differential diagnosis must be made between tuberculosis of the kidney and the following affections: Simple pyelitis, pyelonephritis, kidney stone, neoplasm, the so-called essential kidney hemorrhage, and polycystic degeneration of the kidney. For the diagnosis of renal tuberculosis a knowledge of three things are essential, namely: The use of the cystoscope, catheterization of the ureters, microscopic and chemical analysis of the urine. The use of the cystoscope should not be difficult in the hands of an experienced man. It can be introduced without very great pain to the patient, and its manipulation after being introduced should not cause great discomfort to the patient. The needs for the use of the cystoscope in the diagnosis of renal tuberculosis are many. First, to determine whether or not the disease has extended into the bladder, in which event an operation for the removal of the kidney would be doubtful. Its use is also necessary to determine whether or not the bladder may be alone affected. Also careful inspection of the mouth of the ureters is necessary, for in tuberculosis of the kidney the ureteral orifice presents a peculiar appearance, small shallow ulcers being present around it. Someone has likened these ulcers to footprints in freshly fallen snow. When no evidence of tuberculous deposits are found in the bladder, then the next step to be taken is catheterization of the ureters, to determine which kidney is involved or whether or not both may be involved. Catheterization of ureters in the male is attended with great difficulty except in the hands of the most experienced men, and I am sorry to note that very few men, even of our genito-urinary specialists, have given much time to this very important part of genito-urinary work. I have recently seen a man, who is giving his whole time to genito-urinary work, make a complete failure in attempting to catheterize the ureters, and after having the patient under complete anesthesia for more than one hour, he gave the matter up and said he

just could not do the operation. Catheterization is of the utmost importance in this disease and without it a positive diagnosis cannot be made, for no man can judge in any other way whether the pus and blood comes from one kidney or both, and until we are sure about that, any operation for the removal of the kidney is not justifiable, for the removal of one diseased kidney when the other is also diseased, only hastens the patient's death. As to the microscopic and analysis of the urine I shall have little to say, except without its knowledge no one can hope to diagnose this disease. As to the treatment of tuberculosis of the kidney, as has already been mentioned, the removal of the kidney is the only thing to be done when the disease is confined to one kidney, and I will say further that no operation known to the surgeon offers more hope to the patient than this one. When both kidneys are involved or for any other reason operation cannot be done, then the means for building up the general system, as in any other wasting disease, must be resorted to, without hoping to be able to reach directly the seat of the disease.

#### DISCUSSION.

DR. J. R. WATHEN: I listened with a great deal of interest to the paper. It is certainly a very extensive resume of the subject, from the earliest time to the present day, and it goes to show that even to-day we are almost in the beginning of this field of work. I was rather surprised at one thing, and that was the essayist's statement that ninety per cent of all cases of tuberculosis of the kidney were in the beginning unilateral. Now, the highest percentage I am familiar with has been given in this country by Kelly, who reports 57 nephrectomies for tuberculosis of the kidney where he says 84 per cent were unilateral. It has been generally conceded by the German surgeons that 50 per cent are unilateral. That is probably a little high. When we consider this question from a modern standpoint it is a little early to state conclusions. Kümmel, of Hamburg, who has reported more nephrectomies than any one else, reports 74 cases with five deaths. Kelly reports 57 cases with four deaths. With these small statistics it is a little early to draw positive conclusions.



There are some things that we can state with positiveness from our clinical experience. One is, that the involvement is usually primarily in the kidney, and the infection is brought to the kidney through the blood. Another point is that primary infection of the bladder is rare, and that in tuberculosis of the bladder associated with tuberculosis of the kidney the treatment of the latter is almost useless, but when we do a nephrectomy and remove the tuberculous kidney tuberculosis of the bladder cures itself without treatment. That is a valuable point. Another thing is, that all operators along this line are agreed that as soon as you make a diagnosis of the unilateral tuberculosis of the kidney, operation is indicated.

The next point is something that I would like the general practitioners to discuss, and that is, that all the surgeons are agreed that hyaline and granular casts present in the other kidney do not contraindicate operation.

DR. ALLEN: I enjoyed the paper. I would like to ask some of these men who have catheterized the ureters if it would not be a safer plan to segregate the urine and determine the affected kidney, because there is a great chance of doing some traumatic injury to the ureter in introducing the catheter, and if you should introduce the catheter through an infected bladder there would be danger of causing tuberculosis in the kidney if not already involved. You can determine with almost the same degree of certainty by segregation of the urine as to which side the affected urine is coming from.

I have noticed in the past that a great many have reported cases where one kidney was removed and the other kidney was not thought to be involved, but after the patient died of some other condition, it was found at autopsy that the remaining kidney had been involved in an old process of tuberculosis; and they claimed that removing one kidney by throwing more work on the other kidney and increasing hyperemia it cures the kidney of the old tubercular lesion. I do not see that this is much advantage. You get a great amount of blood there and a great amount of the toxic condition to deal with, and it seems that there would be an apparent evening up on each side. I do not see that it would be of much advantage to the other kidney to throw a double amount of work on it even if it has a double blood supply. If that be the case it seems that with the unusual blood supply we have in the kidneys and the constant active hyperemia that if any place could be taken care of by hyperemia

it would be the kidney. The kidney is almost absolutely a vascular organ, and it seems it would be able to take care of the tuberculosis.

As to Hyaline casts, I do not believe a Hyaline cast means anything. I believe any irritative condition of the epithelia will cause the cells to weep a mucoid material just as the nasal cells weep and give us a catarrhal condition. I do not believe the casts are of any significance except to watch for any secondary conditions that might come on.

DR. WILLIAM H. WATHEN: I am pleased that the essayist emphasized the fact that tuberculosis of the kidney is a disease of equal interest to the internist and the surgeon. In fact it is more interest to the internist than to the surgeon, for the reason that if the internist is not able to diagnose these cases early or to suspect trouble of the kidney early the surgeon can be of no benefit whatever in the surgical treatment, therefore, we should employ every means possible in the diagnosis and treatment of tuberculosis of the kidney. It is impossible to learn from statistics, and probably it will never be possible to learn just the number of cases that are unilateral at the beginning, for the reason that the disease may begin in one kidney and may extend to the other before we have been able to diagnose the first infection. However, time will offer much to aid us in this particular as our means of diagnosis are constantly increasing. Every practitioner who suspects any serious complication of the kidney ought to immediately have the urine examined carefully by a thoroughly trained pathologist so as to get definite data by which to reach a correct conclusion. It is well known while the general practitioner of medicine and the general surgeon may make the ordinary chemical and microscopical examination of the urine, but when it comes to these difficult tests he is not capable of doing so. But fortunately in every city we have some one who can make these tests.

The infection I would think might be more frequent in the right kidney primarily than in the left, because we find that the tubercle bacillus must probably often reach the kidney through the bowel, and we do not find much tuberculosis in the bowel until we come to the obstruction about the ileo-cæcal valve. Then there is another obstruction where the contents of the bowel are held for the absorption of nutriment and the liquid contents, just where the colon is firmly attached to the kidney with no intervening peritoneum, the right kidney being lower than the left.

Hence if there is any wounding of the epithelium of the bowel in this locality the tubercle bacillus may pass readily into the kidney and afterward pass to the other kidney through the circulation.

We formerly taught that tuberculosis of the kidney was an ascending disease. We know that is not true, and that tuberculosis of the bladder is the result as a rule of descending infection from the kidney. I am inclined to the opinion that tuberculosis of the epididymis and the prostate are ascending diseases reaching the structures through the genital tract before reaching the bladder. The urine washes the disease away from the bladder just as the urine washes down the tubercle bacillus from the kidney into the bladder.

The first point to establish is that we have tuberculosis of one kidney primarily ; then the treatment. How establish this? The first thing is catheterization of the ureters. This is easy in the woman, difficult in man. As a rule, that will settle the question of operation.

If we can finally train men to use freezing test of blood and urine compared with that of distilled water as KümmeI used it we would have a test of great value. He found that the freezing point of the blood is 56/100's of a degree centegrade lower than the freezing of distilled water, and if you have that freezing point you have kidney sufficiency. But if it goes down to 59 or 60 and still lower than that you have positive kidney insufficiency, and if you operate on these patients removing either kidney they will die. He seems to be the only one up to this time who has done successful work in this line. He gets results that cannot be controverted. If he does these things why cannot others do it?

DR. BARBOUR: I enjoyed the essay, and I have enjoyed the very full discussion of it. I can add but little mite to what has been said. One point I would like to mention is the exceeding rarity of genito-urinary tuberculosis in children. Of course we find tuberculosis of the lungs and of bones quite often, but genito-urinary tuberculosis seems to be practically unknown in the young.

I do not know whether Dr. Wathen's theory of the transmission of tuberculosis of the kidney is the one generally accepted. However, up to a certain extent we know that tuberculosis occurs less in the adult than in the child. In children the bacillus is carried by the lymph channels oftner than by the blood.

It is carried to the lymphatic glands and possibly to the lungs by the lymphatics. Children cough up this sputum and swallow it, and it seems that if tuberculosis of the kidney was caused in the way, mentioned by Dr. Wathen, it would occur very frequently in children. But it is almost entirely unknown in the young.

DR. FLEXNER: I want to reiterate what Dr. Barbour says about the paper and the discussion. The essayist has wisely thrown the burden of this matter upon the general practitioner who presumably sees these cases first, but in the recognition of the disease there are some points that have been overlooked and in my opinion they are vital. In the first place to make a diagnosis of renal tuberculosis without the discovery of the bacillus is like the play of "Hamlet" with Hamlet left out. The recognition of the bacillus in the urine is complicated by the smegma bacillus. It is an acid fast bacillus like the tubercle bacillus. It has been shown that by properly cleansing the parts in the male or female we can get rid of the smegma bacillus. When the smegma bacillus is taken care of the recognition of the tubercle bacillus is easier. Segregation of the urine and direct catheterization of the ureters in the female is an easy matter, and the question of diagnosis is at an end.

There are some symptoms preceding the analysis of the urine that are exceedingly significant if they are properly watched. I have had the opportunity of observing personally six or seven cases in the last two years. I have never seen tubercular urine that was not acid. The urine in ordinary cystitis, or the symptoms complained of, are largely the dysuria of cystitis, but the urine in most forms of cystitis is alkaline urine, and as soon as urine comes into my hands and I find an acid urine and the pus is easily thrown out with the centrifuge, I am suspicious of renal tuberculosis. I am well aware that in the beginning of renal tuberculosis the bacilli are difficult to obtain and are sometimes not present in the voided urine. A symptom from the clinical side which Kelly has brought out is that the symptoms are invariably aggravated at night. There is a nocturnal disturbance and the patient is required to empty the bladder several times. Then if we have these symptoms persisting and we have not been able to find the tubercle bacillus and the patient is with or without temperature, with or without great loss of weight, in order to make a diagnosis early enough to be of health it is necessary to resort to the tuberculin test. In every case where Kelly used it the injection of the tuberculin was followed by a

shower of bacilli. I do not believe there will be two per cent of failures following the injection of the tuberculin. In one of Kelly's cases he was able to find the tubercle bacillus in the urine and his nephrectomies were successful as Dr. Wathen said.

I fear that my learned friend's pathology has gone wrong. If it were of intestinal origin we would see more cases of kidney tuberculosis in children. The tubercle bacillus is not a motile organism. It is carried by the blood or lymph streams and the consensus of pathologists at the present time is that renal tuberculosis is hæmatogenous in origin. The tubercle bacillus does not wonder from the colon to the kidney and become localized in the kidney in that way. In children we may see many cases of lung, meningeal and bone tuberculosis, but very few cases of renal tuberculosis. Healed tubercles have been found in the kidney where pulmonary tuberculosis has gone on and caused the death of the patient. I think Dr. Allen's explanation is that the kidney is well supplied with blood. When one kidney is affected I think it is important that the surgeon should wait until hypertrophy has taken place. Before any operation is attempted one should be sure that there are two functioning kidneys there. It occurred in the practice of one of my Eastern friends that he removed the only kidney. "The operation was a success but the patient died."

DR. SATTERWHITE: I just want to report a case. A few months ago I was called to see a young girl of about 17 years that was taken with frequent micturition, the urine that she voided contained a great deal of pus. There was no pain at any time. She probably voided urine once during the night. One practitioner and two surgeons saw her with me. They all claimed that it was a tuberculosis trouble of the kidneys from the fact that there was no cystitis. A competent microscopist examined the urine but could find no tubercle bacilli. I was unwilling to concur with that diagnosis, as in such aggravated cases as that there should have been no difficulty in every microscopical examination as Dr. Flexner says of detecting the tubercle bacilli. The two surgeons made an endeavor to make an examination of the bladder as well as the ureters. Two or three microscopists examined various specimens of the urine and never found a tubercle bacillus. The pus in the urine was very abundant. The young girl lived about four months.

DR. IRWIN: The essayist covered the ground so carefully and so well that he has left little to be said on the subject of renal



tuberculosis. The important point in my judgment has been thoroughly brought out, and that is how to determine tuberculosis of a single kidney early enough to enable the surgeon to cure the patient, and when the diagnosis is made it becomes a surgical disease. Where we have no tuberculosis of any other organ of the body, where we have simply an alkaline urine and a frequency of urination in the night—more often in women than in men for we are told that two women to one man have tuberculosis of the kidney—we must look upon these symptoms as being rather suspicious when we exclude the number of things that might cause the condition. Uncomplicated attacks of tuberculosis of the kidney are extremely difficult to diagnosticate, and I question whether any physical symptoms alone will point to it, even tenderness over the region of the kidney, blood and pus in the urine, alkaline urine and the nocturnal passage of urine in small quantities. The presence of the tubercle bacillus is confirmatory of any opinion in that direction, but failure to find the bacillus does not always prove its absence. Some of the reports show that if there are evidences of much pus coming from the kidneys the tubercle bacillus cannot be found; but this does not disprove that we are not dealing with tuberculosis of the kidney. Now I have seen in the thirty-five years of my practice a few cases of tuberculosis of the kidney. I remember one case in a lady in whom I suspected tuberculosis of the kidneys. I furnished two samples of urine to a microscopist and no tubercle bacilli were found. I was not contented with that and furnished another specimen and the tubercle bacilli were found. I informed the relatives of the woman that she had tuberculosis of the kidney, and that I could not cure her. She must submit to a surgical operation if there was any attempt made at a cure. I believe that it was unilateral, because there was tenderness over one kidney. It was considered impossible that she could have tuberculosis of the kidney. Dr. Koehler was called in; he said he could cure her. He cured her in three months. I mention this to show the stupidity of people after the diagnosis is made. The important point in those cases is to find out as soon as you can that you have to deal with tuberculosis then to make a differential diagnosis of it with the greatest amount of care, and you have to know that the urine is evidently the urine from that kidney if you do not have tenderness.

DR. WILLMOTH: I certainly want to thank the essayist for the presentation of this subject. It has brought out a very

lengthy and instructive discussion. There are some things regarding the subject that I think need emphasizing, and there are one or two points that have not been mentioned. The first Dr. Allen spoke of, that is the segregation of the urine. You will remember a few months ago a long article that was reviewed from the *Dutsche Medizinische Wochenschrift*. It was a resume in which it was stated that the segregator was not reliable in obtaining the urine from a tuberculous kidney. You could not get information that you could depend on. It was not absolutely certain. When it comes to the diagnosis of the condition Dr. Flexner has spoken wisely of two or three points. There are others that he did not mention. One is the injection of the guinea pig when we are not able to find the bacilli with the microscope. In using the segregator where we have a diseased kidney it may leak and we would get a specimen from each side. There is only one method you can depend upon and that is the catheterization of the ureter. This will show from which kidney the bacilli are coming. In this article it was stated that where we have an acid urine, a pouting ureter which could be seen in the female with ulcers around the mouth or even a red pouting mouth, it was conclusive proof almost that we were dealing with tuberculosis of the kidney enough if you had pus in it to justify you in opening up the kidney.

That brings us to the most important part, that is the result to be obtained. Dr. Irwin has spoken of the primary lesion in the kidney, and the difficulty of finding the tubercle bacillus. I agree with him that the bacillus is difficult to find in the ordinary way of staining or looking for it, even in advanced tuberculosis of the kidney where the symptoms are such that we cannot be mistaken. Even an affected bladder from the kidney will get well without any treatment if you remove the primary infection above, and the ureter can be moved down to its lower fourth. If the kidney and the ureter are removed the lesion of the bladder will take care of itself.

The means at our command are summed up in ureteral catheterization hoping by this means to determine whether there is a functioning kidney on the other side. This was the summary of this article by a genito-urinary surgeon. He did not attach any importance to hemorrhage from the other kidney. That could be explained by the hyperæmia present. He did not attach much importance to that.

DR. BAILEY: I want before saying anything about the paper

to take this opportunity to thank the Society for its kindly sympathy extended to me when I completed fifty years of practice and also the condolence extended to the community for suffering it that long.

As a general practitioner I am willing as soon as possible in these cases, as I have been in appendicitis for many years, to turn them over to the surgeon, because I believe there is largely where the success is obtained.

First in regard to the frequency or infrequency of unilateral involvement, I think practically it is impossible to say, but I would make the statement that in involvement of the lung there is seldom an involvement of the base, but rather an involvement of the apex, and I believe in the majority of cases it must be unilateral.

When it comes to the diagnosis of these conditions I would say that those who see the cases cannot make a diagnosis in time to make surgery efficient. We have men skilled in the diagnosis of these cases, but the men who see them early are now competent to make a diagnosis. I doubt if segregation of the urine can give much accurate results as we can obtain from catheterization of the urine. A man who is skilled in this has little difficulty in catheterizing the urine. Young told me that he cured a long standing hemorrhage from one kidney by the use of adrenaline solution injected high up on that side. He determined this condition by the use of a catheter and injected this adrenaline solution and cured his patient. The hemorrhage had been going on for months and years.

When we talk of these diseases we should talk of people competent to do these things, and the diagnosis should be made by determining whether the tubercle bacillus is in the urine, and it is necessary to know from which kidney the urine comes that contains the bacilli. It is our misfortune not to be able to do that.

I am surprised that nobody has mentioned the use of the opsonic index. Is it not true that most people with tubercular involvement in the system show the progress of the disease by a lowering of the opsonic index. If we have a local involvement in the lung and increase the opsonic index we improve the patient's condition. We cure the lung, why not cure the kidney? We know that nature cures that whether we can do it or not. The lung is cured even if we cannot cut it out; if we have tuberculosis anywhere in the body, if we increase the resistance

we do the patient good and give them a chance of cure. If the treatment we have been using where the lungs are involved has been so successful, why cannot tuberculosis of the kidney or tuberculosis in any part of the body be cured by this method? I am surprised that nobody has mentioned the successful treatment of tuberculosis in recent years. Why cannot we cure tuberculosis of the kidney if we cure it in the lungs? I thank Dr. Morris for the privilege of hearing his paper.

DR. WM. H. WATHEN: The opsonic index cannot be of much use in diagnosing of unilateral tuberculosis of the kidney. In answer to Dr. Flexner's suggestion that my belief in infection through the alimentary canal is not in harmony with the latest accepted facts on this question, I would say: That the tubercle bacilli can only enter the system through the mucus membrane of the tonsils, bronchial tubes, bowel, nose, mouth, genito-urinary tract and the vagina, and that they do not usually enter through an intact normal endothelium. It effects the tonsil quite frequently and when the tonsil is involved the lungs may become involved. The lungs are always in such cases involved before the kidneys. These bacilli are probably never taken into the system through an intact normal epithelium of the throat, lungs or intestinal tract, but it is taken in through an injured epithelium. The epithelium is constantly injured by irritating substances like undigested particles of food or parasites. In the lung where we have a perfectly normal epithelium we may inhale the tubercle bacilli and throw them off without having tuberculosis. But if we have impaired epithelium we will not have this occur. The tonsil and the intestinal tract are the weak points. When the bacilli get up in the region of the kidney if there is injured epithelium at the point in the colon just below the constriction that holds the contents here for a considerable time churning up and down, the germ may pass easily through the walls of the intestines to the kidney. The appendix is involved by direct contact. I believe that the ovaries and tubes and the genital organs of the male are nearly always involved from below.

DR. MORRIS: I have nothing to say except to thank the gentlemen of the Society for their liberal discussion. The essay has been liberally discussed and I appreciate it.

EMERGENCIES AND SHORT REPORTS OF  
EMERGENCY CASES.\*

BY EWING MARSHALL, M. D.,  
LOUISVILLE, KY.

TO a great extent all physicians are exposed to the calls of emergencies, but the doctor who strictly limits his field of practice within a specialty is greatly relieved of much of the responsibility devolving upon the so-called "general practitioner."

The strain at times when a man is overworked and more or less out of health is appalling.

In his reading he runs across the account of some emergency and all the fine spun details of the possibilities that may await him at his next call.

The varied and bulky paraphernalia, stated by a theorist as being essential to the care of such a case, distress him, because it is not in his power to have them.

The more I investigate the armamentarium of the medical profession the more I am impressed with the wasteful extravagance of the average man in buying both books and instruments.

The average man who has been practicing as long as fifteen years or more has a stock of books and instruments the bulk of which he has no use for, and often many instruments and books that he has only used once or twice if at all.

In emergencies a few things that are commonly needed is all that should be carried. At last it is the doctor that is wanted; if he gets there he will find most anything that is essential or use a substitute for it. When a call comes, if possible, in a few words learn the nature of the trouble and then hurriedly pick up what will be needed.

In any emergency if anything arises where a specialist can be used to an advantage he should be called. A specialist being told that he is needed by a brother doctor in an emergency should respond to the call at the earliest possible moment, as emergencies with him should take precedence just as they do with a general practitioner. Of

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\* Read before Louisville Clinical Society, October 8, 1907.



course the general practitioner should use his brother doctor considerably and make the visit fit in with the other's time as far as possible.

When run down mentally and physically, as mentioned before from overwork and harrassing cares, he is called to a desperate case, often never having known either the patient or his friends before, and has to decide upon vital procedures, deciding how to try to fend first off death and then ultimate bad results is a trying ordeal.

Certainly, a brother doctor, if he has the slightest spark of charity in his make-up, should protect his fellow practitioner as long as he is faithful to his trust whatever the result.

There are few cases where any two of us in general practice would agree in toto as to the care of them, and we often conscientiously disagree in what is really essential. If a man of experience has had good results in his way of practice and applies his knowledge and skill the best in his power he has done his whole duty.

My policy is always to say this is my best judgment but I do not claim to be infallible and then, even though an undesired result may come, certainly the law will uphold such action.

A brother doctor should defend both the reputation and the purse of one so acting from the attacks of an ungrateful patient acting under the advice of a jack-leg lawyer.

I will briefly report a few emergencies which have come to my care lately and the immediate attention given them:

CASE I.—A man carrying a timber on his shoulder made a misstep and sat down on an iron rod. These rods are used for bracing the concrete walls. They are about forty feet long and the size of my index finger. They are twisted so as to be firmer in the concrete. The rod entered the gluteal region just to the right of the anus. The men said they measured the blood mark on the rod and that it had penetrated him five inches. I tried to get him to go to the hospital but he would not. With gauze wrapped around my index finger I cleansed the wound as well as I could

after having scrubbed the buttock. I removed a good deal of debris. One thing was a piece of cloth about one and one-half inches long and three quarters of an inch wide, shaped like an Indian arrow-head. It was the double thickness of his overalls and his drawers. It had been driven into him fully two inches. I introduced my index finger into his wound just like you would examine a narrow vagina, and I am sure the tip of my finger penetrated him close to if not fully five inches. Not being able to get him to go to the hospital and as it occurred just at night-fall I strapped the parts with Z. O. adhesive to prevent any hemorrhage during the night. I saw him at his home before seven o'clock the next morning. I removed everything and wiped out the wound again with gauze wrapped around my index finger and then packed the wound tight with strips of gauze. The after care of the man fell to my friend, Dr. Griffiths, as I went off for my summer trip. When I returned the man was well.

Apparently no resultant injury to the important organs of this region. Why it did not destroy some of them I cannot understand. The man has been improving every day now for nearly a month.

CASE II.—A man in reaching out of a window at the Fourteenth St. power house of the Louisville Lighting Co. had to get behind the switch-board and in some way got his two shoulder blades against the wires of the switch-board and a current of twenty-two hundred voltage passed through him. He was drawn into a knot which lifted his feet from the floor. Fortunately his weight tore him loose and he fell to the floor. His fellow workmen heard his screams and the abnormal noises of the machinery and rushed to him. They found him comatose. They practiced artificial respiration and intermittent tongue traction. When I reached him, about twenty minutes after the accident, I found him still dazed but slowly coming to himself. He had two large burns each about the size of a silver dollar. They were located over the spines of the scapula. They were a long time in getting well but the underlying

bones, though so superficial, were not involved and the man made a perfect recovery.

CASE III.—Called to a young woman about to her time with her pregnancy with the message that profuse hemorrhage had come on. I found her down stairs and had her carried to the room where she was to be delivered. I sent for another doctor to give cloroform thinking I would have to turn for placenta praevia, but by the time he arrived the os had dilated sufficiently for me to examine her better, and I found the placenta had been torn away where it had been attached close to the margin on the right side of the woman. I stretched the os and pains came on and the head descended and I left the labor take its course, and she had no more hemorrhage, though she had a tedious labor and the child was born dead.

CASE IV.—A man standing on a board on the sixth floor lost his balance and fell, being stopped by some timbers on the second floor. He had fallen through an elevator shaft and on his way down he struck some swinging timbers that broke his fall. That blow broke one of his ribs and he landed on his hands and feet. He was taken to the hospital apparently severely shocked. In five days he was able to return to light work.

CASE V.—I was called by the company putting down the underground wires at Fifth and Broadway to a man who had been overcome by gas, caused by a break having occurred in a gas pipe passing through the ditch through which he was working. When I reached him I found him lying on the dirt near the ditch and I had him carried into the grounds of the Baptist College and laid on the grass. As he was breathing fairly well I watched him slowly come back to himself. After he was pretty well at himself an elderly gentleman walked up to the foreman, who was standing near me, and said, "Why don't you walk that man around?" He replied, "Because I have a doctor to look after him." The man came around all right in a little while.

## DISCUSSION.

DR. ALLEN: I enjoyed the paper very much. I was hoping that Dr. Marshall was going to say something on the subject of shock met with in emergencies. It is my opinion that a great many of us, as a first resort, when we find a patient in a state of shock is to fill him full of nitro-glycerine and strychnine. I think that when one is in the state of shock with lowered blood tension and a paralytic condition of the vasomotor center that we could give no more deadly remedy than strychnine and nitro-glycerine. If we give strychnine we stimulate a center that is already exhausted. Strychnine increases susceptibility to shock by making nerve terminals more impressionable.

Nitroglycerine stimulates the vasometer dilators and increases the caliber of the blood vessels, that is, the arteriales, if there is any energy left in their centers, and this lowers the vascular tension and exhausts the vasomotor center as well.

I think we often make a mistake in diagnosis between collapse and shock. I believe that in collapse, where we have a suspension of function, that strychnine and nitroglycerine are indicated. We bring into activity the suspended function, but when we have paralysis of the vasomotor center if we give nitroglycerine and lower tension and stimulate with strychnine it will do the patient harm. I think saline solution per rectum or intravenously, morphine, lowering the head and bandaging the limbs will do more good than nitroglycerine and strychnine which we use so much.

DR. SATTERWHITE: I do not know of anybody in the City that has had as large a field of emergency cases as Dr. Marshall. I do not know that I have anything to say about the subject other than that we are often very much embarrassed by the crowds that gather around and the sooner that we can get the patient to a house or hospital the better for the patient as well as the doctor. I believe that, as Dr. Allen said, morphine is the sheet anchor for shock. Atropine and morphine together with saline solution are the things that I use altogether.

DR. MORRIS: I do not think that the paper in itself is discussable. At the same time Dr. Marshall opened up a field for comparison of facts that is very essential on which we can all say something by comparison at least. I do not know a better way to talk about the subject than to give my experience along this line, and I am going to give you my experience for about six weeks relative to emergency cases, all bearing along the same

line exactly. Something that never occurred to me before in this way.

About the first of June I was called to see an old lady who had fallen and received a fracture of the surgical neck of the humerus. She was eighty years old. She was walking across the floor and tripped on something and fell. I put the fracture up in the ordinary adhesive dressing and at the end of six weeks removed it and found she had a good result.

A week later I was called to see another lady seventy years of age who had fractured the arm above the elbow joint. I put on two thin splints, fastened them with an adhesive dressing, and got a good result.

About the same time I was called over on Market street to see a man who was injured in a street car accident. The man was struck by a street car and dislocated his knee, the bones being separated so that you could place your finger between the end of the tibia and femur. I put on a temporary dressing for a week and then a permanent dressing. At the end of five or six weeks he has fairly good motion of the joint. He is now going about on crutches.

About a week later I was called to a street car accident, near the same place, in which an old lady seventy years of age was struck by a car and received a fracture of the femur. Dr. Griffith was with me. After keeping the leg in plaster dressing for six weeks she made a good recovery. She has perfect union and is able to be out of bed.

About one week later I was called to see a boy who had fallen off a stone wall and sustained a compound fracture of the left leg about four inches above the ankle joint. I put it up in plaster of Paris and made a window over the opening in the flesh. I dressed the wound for two weeks, after which time it had completely healed. It was never infected. The other day I removed the dressing and he is practically well.

A week later I was called to see an old man eighty years of age who had fallen and broken the femur in the surgical neck. We put on Buck's Extension. He lived for a couple of days. I think probably an injury to the head caused his death.

About two hours ago I was called to see a lady, and when I arrived I found she had been caught in a gasoline stove explosion and was burned practically over the whole body beginning at the head; the entire face, ears, neck, chest and arms being burned. Three fourths of the body was burned over. She was



suffering from shock, had no pulse, perfectly rational, suffering little or no pain. I gave her a dose of morphine and dressed her wounds with a preparation called Unguentine. I use that and I think it is about as good a dressing for burns as anything we can use.

I mention my experience to show with what frequency accidents sometimes occur. I had four cases of fracture of the leg within two weeks time.

DR. BARBOUR: I enjoyed the essayist's relation of some of the trials and tribulations he has undergone. One of the most interesting experiences that I have ever had in the way of emergencies was in being called to a man who was putting paper on the ceiling of a room. The plumbers were at work in the same room and they had a charcoal burner sitting on the floor. The paperhanger was working near the ceiling. All at once he became dizzy and faint and started down the ladder and finally fell to the floor. The interesting feature in his case was the double poisoning which he suffered. The fumes from the charcoal burner were principally carbon monoxid. As these heated fumes went up to the ceiling he was breathing in carbon dioxid fumes and it was this that produced the dizziness and debility. He suffered also from carbon monoxid poison which is so common in charcoal burners. The carbon dioxid poison passed off quickly but he stayed in bed for a week from the carbon monoxid poison before he could go back to work. This evidently poisoned his blood and it required that time to get back his strength.

DR. IRWIN: Dr. Marshall has called to our mind an interesting matter and in a general way he has brought back old memories. He has shown that one man's experience will not apply to any other, and that in these emergency cases a man's knowledge must be his guide. In other words he must have a thorough knowledge of life and disease and the things that destroy life, before he can act intelligently in emergency cases. A man's past experience has little to do with this. I know of nothing truer and no statement brought to mind more clearly than will be found in Dr. Williams' Principles of Medicine. To understand the system in disease and health and where death is threatened to act according to judgment and according to the condition of the case as you find it.

Dr. Allen has brought up an important point in reference to the effect of drugs. Dr. Bartholow preceded Dr. Allen perhaps twenty-five years and made similar statements along the same

line. He showed that in cases of shock and collapse where remedies might be employed, especially in shock, that small doses of whiskey had the effect of doing good while large doses depressed the vital powers. He showed that there was an ideal point within the economy where irritability was overcome. By giving whiskey in small quantities and repeating, not reaching the point of irritability, it did good, but if he gave more than that it did harm. In other words if a man was given small doses of whiskey repeated it would increase his temperature but if he took a large dose it would depress him and lower the temperature.

I do not think there is any doubt at all but that the teaching of Dr. Jos. Pancoast in regard to emergency cases was about as good as anything I have ever heard. With one eye looking at the ceiling he said: "Gentlemen I am trying to teach you surgery and the principles of surgery and medicine and everything that pertains to the human being. The doctor is happy who can sit in his office and in imagination dress a wound and do a surgical operation. That man when called to an emergency case will always be ready to go."

DR. WM. H. WATHEN: I can say nothing that would add to the excellent report of cases by Dr. Marshall. His wide experience in the treatment of emergencies has made him an authority on this subject. I shall only refer to the case of hemorrhage at the time of labor. I think there was a marginal implantation of the placenta. He was very fortunate as it is unusual with even slight marginal attachment of the placenta to have hemorrhage cease so quickly. It must have been because the placenta was quickly torn from the uterus to a very large extent and the head came down and the pressure prevented any further hemorrhage. The death of the child was probably caused by the extensive detachment of the placenta so that the child could not get oxygen.

I was interested in Dr. Allen's remarks about the treatment of shock. My experience in shock does not refer to what is known as accident practice. It is with shock that follows prolonged operation or where there is considerable loss of blood before or during the operation. I have observed in an experience of twenty-five years that in those cases where there is not loss of blood or a very great shock following an operation I have gotten no results from strychnine digitalis, nitroglycerine or atropine, and I think they are generally contraindicated for the time being. I have given atropine with morphine and I can see no rea-

son why I should do it, for we certainly do not usually want to draw the blood from the heart to the surface by dilating the vessels. Morphine, in my experience, given in small doses, and if necessary repeated, is the best remedy. At the same time the foot of the bed should be elevated and we should give subcutaneous or intravenous injections of salt solution. Heat should also be applied. If the patient will not recover from shock from loss of blood following an operation from this treatment he will probably not recover by the substitution of other remedies.

DR. MARSHALL: In the great majority of these emergency cases we are called to see people whom we have never met before and they are greatly alarmed and we have to classify them. We meet all kinds of people. The whole idea in writing the paper was that in emergencies, as Dr. Irwin well put in his quotation, it required a man who was ready to act. In the great majority of emergency cases we can relieve the anxiety of the family.

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## ANESTHESIA, GENERAL AND LOCAL.

BY C. E. MONTGOMERY, M. D.,

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SINCE the surgeon has so nearly mastered technique, the thing that should now concern him most is the anesthetic, for in this lies the real danger of the operation at present. And for the welfare of the patient there are few things of more vital importance. The patient to-day regards the danger of the operation by a competent surgeon as secondary to that of going to sleep. How often do you hear them ask "will I ever awake?" It is this fear that prevents many people undergoing useful and needed operations, and for this reason if no more important one was to be considered, the surgeon should give anesthesia more attention.

The science of anesthetics and the art is very different. In our medical colleges the science may be well taught, but who would want an anesthetic from one who knew only the scientific theories. The largest clinics have found the art to be more important than the science, and the anesthetic is given by one who has never studied medicine, but

who has been thoroughly trained in the art of administration. On a recent visit to some of the best regulated hospitals and the clinics of men of world-wide reputation, I was impressed with the art of anesthesia. I say art for in many of these hospitals the anesthetic is given by a nurse and not by a physician. While a knowledge of the physiological action of anesthetic drugs is important it should be combined with artful application, and the conscientious physician who will make use of the art as well as scientific rules is undoubtedly more competent than any one else.

Danger to the patient during the anesthetic period and subsequently is first to be considered in the choice of an anesthetic. A patient should never be subjected to the consequences of a general anesthetic when the operation can be done with ease and safety under local anesthesia. Nor should he be required to take a heavy anesthetic when a light one, such as nitrous oxide, will fulfill all requirements. Is it thoughtlessness on the part of the anesthetist or is lack of knowledge of the art of administration responsible for the needless dangers to which the patients are oft-times subjected?

Ether now holds first place in the long list of anesthetic drugs, and if one places any value upon the opinion of men of the widest experience it is justly entitled to the place it now occupies as the safest and best all-round anesthetic.

In a symposium on the choice of anesthetics, the *Therapeutic Gazette*, June, 1906, submitted the following questions to a number of surgeons.

(1). What is your favorite way of inducing anesthesia, by ether or chloroform?

(2). If you use these drugs, is it your custom to give oxygen with them?

(3). Do you think it wise to precede their use by ethyl chloride or nitrous oxide?

(4). Will you state the cases in which you think that each of these anesthetics is the one of election?

(5). Have you seen the article by D'Arey Power, in

which he claims prolonged anesthesia by chloroform is more dangerous than the same length of ether anesthesia? What is your experience?

Briefly stated the answers are:

W. W. Keen, Philadelphia: (1). Uses ether in 95 per cent of cases, because there is less danger. Has not read Power's paper but believes principle to be true from experience. (2). Rarely uses oxygen with ether, but usually does with chloroform. (3). Sometimes uses ethyl chloride or nitrous oxide but not as a routine. (4). Uses chloroform in operations about the face and mouth in children, because there is less mucous. Usually uses chloroform in renal diseases but always with oxygen, but believes ether will do as well. Uses ether in brain operations, and always uses ether where it is a matter of indifference.

William T. Bull, New York: (1). Ether. (2). Never. (3). By nitrous oxide. Have had no experience with ethyl chloride. (4) Nitrous oxide and ether in general, and chloroform only for brief operations when the heart is sound.

Roswell Park, Buffalo: (1). Prefer chloroform if there is no contra-indication. Like to precede it with ethyl chloride.

Dr. Rodman, Philadelphia: (1). Ether, the safest and not infrequently the most hazardous. (2). Best to precede with ethyl chloride, or nitrous oxide as there is less danger of after effects. (3). So far as immediate deaths are concerned ether is far safer than chloroform, but taking all remote effects into consideration the difference is not so great. Believes the drop method will improve this danger. Chloroform is preferred in nephritis, arterio-sclerosis, aneurism, bronchitis, pulmonary affections, and for children.

Robert T. Morris, New York: (1). Ether as a rule. (2). Oxygen with chloroform occasionally. (3). Nitrous oxide in advance of ether regularly, and ether for a few moments if chloroform is to follow.

E. E. Montgomery, Philadelphia: (1). Ether, usually plain. (2). Sometimes pass oxygen through chloroform and give it as vapor. (3). Like ethyl chloride if patient



is nervous. (4). Chloroform in catarrhal air passages and kidney diseases with high arterial tension.

Nicholas Senn, Chicago, says: "My standard anesthetic is ether, preceded by nitrous oxide gas. I consider chloroform very dangerous in its immediate and remote toxic effects, and only use it in operations on the brain and in laryngectomy. The preliminary use of nitrous oxide shortens the anesthesia and diminishes the irritating effects of ether on the upper air passages."

I recently spent several weeks in the clinics of doctor J. B. Murphy, Drs. A. J. and Edward Ochsner, Chicago, and during that time I saw chloroform given twice and those cases were operations on the mouth in which it was necessary to use the cautery. Of the large number of anesthetics observed, ether was given and in no case was there untoward symptoms.

After considerable experience with anesthetics and from what I have observed in the best regulated clinics, I have adopted the following method of administering ether, and have found it very satisfactory.

For all to proceed smoothly the patient must feel assured that he will be well cared for. All idle talk concerning anesthesia by those in attendance should be prohibited, and a few words of instruction and assurance from the anesthetist should be given. Always tell the truth to your patients when asked if it is a dangerous procedure, and tell him that it is more or less so, but by following instructions the element of danger can be greatly reduced. Many patients become excited because of lack of knowledge of what to do and what they are expected to do. I think it is well, especially in excitable people, to precede the anesthetic half an hour with a hypodermic of morphine sulphate, grs.  $\frac{1}{8}$  to  $\frac{1}{4}$  and atropine sulphate, grs.  $\frac{1}{150}$ . The former quiets the nervous elements and the atropine helps to check the excessive secretion of mucous which is sometimes annoying.

The anesthetic room should be quiet and apart from the rattle of instruments to be used in the operation. Where it is possible to do so the operating table should

be placed in the anesthetic room and the patient allowed to fix himself comfortably upon it. If he desires a pillow let him have it. By placing himself upon the table the loss of time in moving the anesthetized patient from the carriage is saved, and he is in better position on the table than if lifted on when asleep, so there is less danger of pressure paralysis from a strained position which is likely to follow moving from the carriage.

The patient must be kept as quiet as possible in order to prevent excitement. If he is upon the operating table the field can be prepared without disturbance while the anesthetist is getting him to the surgical degree of anesthesia, thus lessening materially the time of anesthesia. If one has to transfer a patient from the car to the table after anesthesia is produced it often brings on a stage of excitement or nausea unless he is surgically anesthetized. It is far easier to push the table into the adjoining room than it is to lift the patient from the car to the table, and there is less danger of bruises and injury to the unconscious patient.

The simpler the inhaler the better. The prime object is to give a good mixture of air and ether without causing him to rebreathe exhaled air. The Esmarek chloroform inhaler covered with three or four layers of gauze answers well, or a simple wire frame to hold the ether laden gauze off the mouth and nose of the patient is all that is required. The patient should be shown the mask and told to breathe through it a few times. Then he should be told that the ether has a disagreeable odor at first, but that he will soon become accustomed to it. The inhaler should be lifted three or four inches above the nose and the gradual dropping of ether begun so the vapor will reach the nose well mixed with air. Gradually bring the mask down to the face, distributing the drops of ether well over the gauze, so it will not produce a concentrated gas in any one place or saturate the gauze and run through upon the patient's face.

Continue to give him directions for as judgment is lost he is as a child in a strange place and unless he hears

some directing voice is very liable to become excited. The ether should at no time be concentrated sufficiently to produce choking, but an even gradually increasing concentration of vapor produced. Never pour on a quantity and then wait a moment and pour on again. The patient breathes regularly and the ether should be given in the same way. As he becomes accustomed to the vapor and breathing through the mask add from time to time one or two layers of gauze until ten or twelve layers are added, and continue to drop the ether evenly over the gauze in such manner as to keep up even concentration of vapor and at the same time limit the quantity of air. A towel is placed loosely beneath the chin and up over the side of the cheeks after the manner of a Barton bandage and the inhaler edges allowed to rest upon it. This forms an even surface and prevents the vapor coming in contact with the face, and also prevents escape of the vapor from beneath the sides of the mask. Do not smother him under or force to rebreathe carbon dioxide laden air with a closed inhaler. If you attempt it you will surely have a long stage of resistance and excitement, but if you will feed it to him as it were, only in concentration that can be comfortably borne until sensation of mucus membrane is abolished, and will continue to talk to him in an assuring manner and direct him what to do and to keep doing until consciousness is lost, the excitement can be avoided in nearly every case.

I usually find eight to twenty minutes sufficient time to produce anesthesia by this method, and rarely have an excitement stage. In a large percentage of the cases the patient requires no restraint whatever, and in those that do, someone to hold the hands gently but firmly will usually control him. In those strongly addicted to alcohol there is usually an excitement stage, but in other patients it should be the exception and not the rule.

After the surgical degree of anesthesia is reached the ether should be given only in quantities sufficient to maintain this stage. The drop of ether can be graduated and the frequency lengthened so as to produce just sufficient

vapor to maintain an even anesthesia. One who is not accustomed to giving ether by this method will be surprised to see what a small quantity is actually required to maintain anesthesia if it is given regularly, for none is wasted.

The surgeon and the anesthetist should harmonize their work, and if any deep anesthesia is to be required, the surgeon should so instruct the anesthetist a few moments before hand so the patient need not be kept in deep anesthesia longer than is absolutely necessary. It is needless to say that many surgeons do not appreciate the gravity of anesthesia, and work very leisurely or even waste time so long as the patient is doing well, forgetting that prolonged anesthesia, even if well borne, is harmful to the patient.

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[TO BE CONTINUED IN THE JANUARY ISSUE.]

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## Proceedings of Societies.

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### PROCEEDINGS LOUISVILLE CLINICAL SOCIETY, MAY 28, 1907.

DR. WM. H. WATHEN: I will report four cases of appendicitis, exhibiting two specimens, the others were destroyed. Here is a small specimen removed one week ago with concretions in it. I saw the boy the preceding day with a temperature of 103 and pulse of 110, and severe pain in the appendicular region. He was taken three days before with pain and vomiting claiming to have been well up to that time. There was never any rigidity of the abdominal muscles indicative of trouble of the appendix, but the doctor in the case assured me that there was no question of his diagnosis. That evening we sent him to the infirmary and the following day I operated.

The symptoms were not sufficiently distinct to make me positive in my diagnosis, and only sufficient to justify me in an exploration. The temperature was still 103 and I inquired if he thought the boy could have typhoid fever. He and another associated physician of experience said that he could not have it, so I made an exploration and found his appendix and removed it. There were some few adhesions about the appendix and some ad-

hesions about the cæcum. The cæcum and the last two or three inches of the ileum was hard and thickened. The cæcum about the ileo-cæcal junction was from a quarter to a half inch in thickness, hard, and you will see a little gland here that was removed just from the inner side of the peritoneal fold of the mesentery of the ascending colon.

I have not seen the boy since the operation, but he has had no trouble so far as the operation is concerned, but his temperature continues 101 in the morning and 103 in the afternoon. This boy either has typhoid fever or he has a tubercular involvement of the ileo-cæcal junction, and even if he has typhoid fever I believe also that he has a tubercular involvement, because I can conceive of nothing else that would produce a thickening of this kind in the walls of the intestine. I can hardly conceive of anything but a tubercular condition that would cause this. Nor can I believe that there would be enough lymphoid tissue about that part of the bowel to become involved in a typhoid condition, because Peyer's patches are usually located some distance up the ileum.

I report this case because of these peculiarities.

The other specimen, a large oval mass was removed on Monday morning from a lady from Newport, Ky. Her doctors had diagnosed gall-stones and recommended her to go to Cincinnati to be operated on. The gall-stone symptoms were not sufficiently marked to justify a positive diagnosis. She would have intense pains frequently in the region of the gall-bladder reflected over the stomach, going to the heart and going through the back, but there was also tenderness in the appendicular region.

The incision was made so that I could examine both the appendix and the gall-bladder. The gall-bladder was found perfectly healthy; bile was draining out with ease and no gall-stones were found in the ducts or in the liver, and the stomach was normal. Going down lower I found beginning above the cæcum a band which extended down deep into the pelvis. I separated the adhesions and finally the appendix had become attached low down in the pelvis. It was brought up and removed. It was the appendix pulled down in the pelvis that was causing this woman trouble. She will be relieved.

I have another interesting case of a different character. The woman was operated on fifteen years ago and both ovaries were removed. At that time we all thought that the ovaries were responsible for much trouble we now know is caused by some other pathological condition, so the surgeon who operated could not be



censured for his work. She did not improve and her attending physician diagnosed appendicitis of a chronic form.

Eight days ago I made an exploration at the outer border of the rectus muscle and separated an omental adhesion to the original wound in the lower part of the abdomen, and found an appendix as large as my little finger with its walls about four or five times thicker than normal; evidently either a tubercular appendix or a very old chronic appendicitis.

This morning between twelve and one o'clock I operated upon a man with a normal temperature and a normal pulse, with the abdominal muscles of board-like hardness, suffering intense agony with a half grain of morphine in him when he reached the city. No adhesions were found, and a sero-purulent matter spread all over the abdomen, the appendix nearly gangrenous. The sero-purulent matter was down in the bottom of the pelvis. No irrigation was practiced and but little sponging. A very large gum tube was filled with gauze and put to the bottom of the pelvis and brought out of the wound, and a piece of gauze was placed over the appendicular region, only the upper part of the wound being closed. He was put to bed in the semi-sitting posture and given rectal enemata of saline solution so as to encourage a great amount of colonic absorption. Three hours ago his temperature was normal and pulse was seventy-two, and I assume he will make an uninterrupted recovery.

The last case is interesting on account of the fact that it is one of those cases that we find reported over this country and in Europe of diffuse suppurating peritonitis, which are not peritonitis at all, and probably the infective germ is not a germ of very much virulence. It may be only the staphylococcus albus. They do not form adhesions and a layer of protecting exudate is thrown out that prevents absorption and they get well. We have recently seen a great many reports of cases of diffuse suppurative peritonitis get well, probably a series of forty cases with one death. Now those cases, I dare say, were operated on promptly and probably not one in five was a case of diffuse suppurative peritonitis, and therefore not dangerous cases at all. All such cases will get well provided you operate promptly and relieve the pressure and institute drainage, without any treatment, removing the cause of infection if possible.

DR. COOMES: I was much interested in the doctor's report. It was my impression that we find Peyer's patches on both sides of the ilio-cæcal valve. It looks like to me that the boy has typhoid fever.

DR. WILLMOTH: I think this is an especially interesting report of cases and should not pass without some discussion. First, I shall differ a little bit from Dr. Coomes with regard to the boy. I believe the boy has a tubercular condition there. I do not see how a typhoid condition could cause an enlargement of the glands. From the thickened condition of the bowel also I would be inclined to think that this is a condition of tuberculosis beginning at that site.

I recently operated upon a woman with a tubercular condition in the abdomen with no lung involvement and she was running a temperature of 103, and the abdomen was studded with tubercles everywhere. There was enlargement of the glands but no involvement of the lungs that we could detect. Both were interesting cases. The doctor did not give us the history of the case, nor whether a blood count had been made and showed an increased leucocytosis, or anything that would lead up to the correct diagnosis of the case. I would be inclined to think that he is dealing with a tubercular condition.

The last case reported is interesting to me, the one with a normal temperature and pulse with an almost gangrenous appendix. My experience has been that in those cases where we have a normal temperature and pulse and where there is persistent pain, that they are the worst cases that a surgeon strikes. They are usually gangrenous, and while I have not seen a large number of cases, I have had occasion to see enough that it leads me to suspect at once where I find a normal temperature and pulse and a rigid abdomen, that I am dealing with a gangrenous appendix. I think the doctor was fortunate in getting the case early enough to remove the appendix before it ruptured. And, as he said, with a far more virulent infection distributed into the cavity, and when the appendix is removed and the patient placed in the Fowler position, he stands a good show to get well.

I agree with Dr. Wathen in regard to the cases of so-called diffuse peritonitis that are reported. I think that many of them reported are such conditions as he has spoken of—of staphylococcus albus infection which as a rule is beneficial to a patient and prevents virulent infection. I further agree with him in that he did not disturb this patient's abdomen further than he did. The more you disturb the intestine the worse for the patient, and the worse is apt to be the infection, and I agree with him fully in the treatment given this patient. I think these are especially interesting cases.

DR. HANES: There is very little I can say in regard to the cases reported. Since the doctor operated on this case I have had an opportunity to get a somewhat more accurate history, and it seems that she has perhaps had this appendicitis from the age of about eight years. Her brother was in my office the other day and said that when she was a child she would have these attacks of colic, drawing her limbs upon her abdomen for relief. She has off and on had these attacks up to the present time, and I would suspect that she has really had appendicitis for a number of years. I have not heard how the case is getting along for the past few days.

There is something about these cases of chronic appendicitis that I would like to hear explained definitely as to constipation and diarrhœa. Now, this patient has had constipation all her life, and then we see cases again where there is a disposition to diarrhœa. There is almost a constant diarrhœa. I think more often there is an alternating constipation and diarrhœa.

I would just like to know from men like Dr. Wathen whether or not they are more liable to have diarrhœa or constipation, or whether they alternate?

DR. ALLEN: These cases are interesting to me. In regard to the first I believe the doctor is dealing with a tubercular condition. I saw a case at the City Hospital a week ago of a man who came in with a history of an injury he received by a fall while lifting a heavy weight. He came in with a temperature of 102 and pulse of 120. It was difficult to arrive at a diagnosis examining over a very distended abdomen, the right rectus was quite rigid, so we concluded that he had appendicitis. We operated and found that he had a quantity of pus. The blood count made before he was operated on showed a decided leucocytosis. The pus was examined and the staphylococcus, the streptococcus and the colon bacillus found. The patient was at once given twenty cubic centimeters of antistreptococcic serum. The temperature was normal in twenty-four hours and staid there for two days; the bowels moved nicely. On the fourth day his temperature was 101 and ran along from 101 and 102 for four or five days. His bowels moved well, kidneys acting thoroughly. I concluded that the antistreptococcic serum had killed most of the streptococci. I know he had a septicæmia at the time, and that some of the germs had been destroyed by this serum. I gave him twenty cubic centimeters more of the serum. Twenty hours afterwards his temperature was normal or ninety-nine and his pulse was

down and has been down for four or five days now. I think possibly that this was a case, as Dr. Wathen said, of a mild form of septicaemia. In the case reported by Dr. Wathen with the enlarged gland I think I should be suspicious of a tubercular condition. I, like Dr. Coomes, do not believe a local tuberculosis could give this temperature, and he may have a military tuberculosis.

Dr. Hanes question interested me intensely. I believe that constipation stands primarily as a causative agent in appendicitis. A person becomes constipated, there is a distention of the large bowels with gas, the large bowel ascends from the cæcum. The peristaltic action of the intestines carries the fæcal matter onward. This constant attempt at peristalsis rolls the fæcal matter up in little masses like marbles. The distended gut prevents this peristaltic action and these scybalous masses drop back into the appendix and there at once set up irritation and cause diarrhœa. Now, there is no doubt but the muscles of the appendix do frequently eject these masses, but if they do not eject them they cause irritation and swelling and breaking down of the mucous membrane and destruction of the cells which allows the infection to get into the connective tissues and we have appendicitis. I believe that primarily we have constipation as an etiological factor, and we have diarrhœa as a sequela following this stimulation of peristalsis analogous to that produced by a foreign body in the appendix.

In regard to the last case Dr. Wathen reported, I believe that every type of pyogenic organism, except the streptococcus, causes an inflammatory deposit quite perceptible to the eye. There is an exudation of lymph out into the peritoneal cavity forming a thrombosis of the lymph vessels just as we have of the blood vessels in an inflammatory area, and the entire peritoneal cavity becomes coated over in the region of this inflammation, and this thrombosis prevents absorption. In the streptococcic infection I doubt if there is this tendency to thrombosis. There seems to be something that prevents the fibrin, and prevents this thrombotic formation. We know that in ordinary pyogenic infection nature throws out a layer of round celled infiltration forming an abscess. In streptococcic infection the bacteria get into the blood and we have septicaemia. These cases do not have the lymph deposits in the peritoneal cavity, therefore there is an absorption of the toxins in every direction. But I think in every other type of pyogenic organisms we have this deposit of nature, and if we can wear coating several days nature can build up her cell resistance.

If we have a streptococcic infection already in the blood and the seat and origin of the toxine is in the blood, all the drainage and irrigation we might do would not relieve our patient.

DR. WM. H. WATHEN: Could there be normally enough lymphoid tissue in the ileum and lower part of the cæcum to become involved in typhoid fever and cause this thickening?

DR. ALLEN: I have held a good many postmortems—over eighty. A good many of them typhoid, and in a few I found an involvement of the mesenteric glands. I found tubercular bacilli and giant cells.

DR. IRWIN: I was interested in Dr. Wathen's report, especially the case of the little boy where he removed the appendix and the temperature went to 102. I would watch the course of the disease in the case. We are simply guessing when we speak of this case, and we are forming conceptions in our mind which we may have to change later.

We know that Dr. Wathen has removed the appendix and some glands about it. He does not speak of Peyer's patches which are involved in typhoid fever in that region. We are totally in the dark, and all I can say on a subject of this kind is that we do not know.

DR. WM. H. WATHEN (*closing*): In the case of the little boy, in which typhoid fever is probably associated with appendicitis, I agree with the gentleman who discussed this question, that we cannot arrive at any positive diagnosis. The appendix was involved but not enough to cause the temperature, and it is a question whether the extensive inflammation of the last two or three inches of the ileum and the lower part of the colon could have caused it. If this boy has typhoid fever is it possible that the lymphoid tissues could have been sufficient in the lower part of the ileum and in the colon to have caused this condition, just as it does in typhoid fever higher up in the ileum? Now, my suspicion of typhoid was such, that after opening the abdomen, I followed up the ileum and examined it for three or four feet and could find no evidence of typhoid as it appeared perfectly normal, the only involvement being in the appendix itself, which was small, and the lower part of the ileum and the lower part of the ascending colon. Time only will decide this question. The doctor reported that the boy was perfectly well until three days before operation.

Dr. Allen has answered the question of Dr. Hanes, but I do not think that Dr. Allen is entirely correct in this explanation.



I believe that constipation would be an indirect cause of appendicitis in that it would prevent the normal peristalsis in the colon and allow the liquid that passes through the ileo-cæcal valve into the ascending colon to remain too long, and encourage the further multiplication of pathogenic bacteria, so that if there were present any irritating condition in the appendix, infection would be more certain. We know that in the appendix and in the alimentary canal there is constant irritation produced by intestinal parasites and undigested food, and it is a doubtful question whether bacteria can ever pass through the normal intact epithelium.

Again, these scybala he speaks of as falling into the appendix I think is not correct. They do not fall into the appendix but form in the appendix, and form as a rule around a little nucleus of inflammatory debris, just as gall-stones form around the inflammatory debris in the gall-bladder. It has been shown in the pathological examination of these specimens that this debris nearly always exists, and that these so-called scybala are not passed down but are formed in the appendix. They increase in size just as gall-stones do, and often grow larger than the mouth of the appendix and cannot be extruded; or if not larger than the mouth of the appendix, the appendix being inflamed, its peristaltic power in expelling these bodies is lessened. Therefore, I think constipation can be only an indirect cause of appendicitis. Now, diarrhoea may be the result of appendicitis itself. I have known a number of cases where the pain was more intense, even in the sigmoid flexure, than in the appendicular region in some chronic forms of appendicitis; when the appendix was removed the patient got well of the sigmoid trouble.

The most important question in all these cases of infection is to operate early, and I want to emphasize my belief that it is only a matter of a little time when this country will have many general practitioners who will be equally good or better diagnosticians than many surgeons operating for appendicitis, because they take these cases from the initial symptoms and study every detail. They then bring them to the surgeon, see him operate, and see the pathological conditions. Therefore, they see the stages of the disease that the surgeon does not see; and I find in the last five years that there is great improvement in the diagnostic ability of the general practitioner; and I have seen a number of cases where the general practitioner insisted on operation when I was in doubt, and when I operated I found that he was entirely correct.

THE  
American Practitioner and News.

"NEC TENUI PENNÂ."

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F. W. SAMUEL, A. M., M. D., SAMUEL B. HAYS, M. D.,	}	EDITORS.	O. P. NUCKOLS, M. D., Ph. G. MANAGING EDITOR.
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## Editorial.

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*Pulmonary Oedema.* It is not with the view of setting forth anything particularly new in regard to the condition of pulmonary œdema, as it arises as a pathological condition, *per se*, but to analyze some of the causes that produce it, aside from its frequent development as a precursor of the death agony. It is too often no doubt regarded as a sign of impending dissolution and looked upon as a condition that is beyond the pale of medical aid, and left to its inevitable termination which without treatment, usually is death.

The condition may be local or diffuse, it may be confined to one lung or may be bilateral. It may occur as a primary condition, or may be secondary to other disease; hence the importance of arriving at a clear casuative diagnosis. Local œdema sometimes develops as a result of pressure on the blood vessels, thus interfering with return circulation, it may also depend on over-distension of the blood vessels as a result of local inflammation. Such a condition can only call for such treatment as would be indicated in the primary lesion. Diffuse pulmonary œdema is often caused by certain poisons that are eliminated largely by the lungs, producing local irritation. Now it

may also be caused by compression of the left ventricle, thus producing a mechanical obstruction to the circulation. We must not overlook the fact that it is frequently the result of poor nutrition, thus producing a relaxed condition of the blood vessels.

The class of cases of most practical importance to the general practitioner are those cases in which the onset is sudden and acute, giving rise to great oppression in breathing and to coarse liquid rales. These cases require prompt causative diagnosis, and prompt and energetic treatment. If such a condition develops during pneumonia or in an extremely debilitated patient whose heart action cannot bear any additional strain, the case as a rule is almost hopeless and we may not expect any permanent results from treatment. This type of pulmonary œdema, however, very frequently complicates interstitial nephritis and general arterio-sclerosis. It has also been suggested as a complication of aortitis, and I recall a case of my own which presented all the symptoms of an inflammation of the arch of the aorta. Some writers have attributed it to a break in the equilibrium of the contractile force of the right and left ventricle. The left ventricle failing to pump the blood into the systemic circulation with as great force as the right ventricle propels the blood into the lungs, thus causing pulmonary stasis and œdema.

The diagnosis of pulmonary œdema should not be difficult and I take it for granted that any practitioner of experience will have no trouble in so doing. It is the differential diagnosis as regards cause that should most concern us. Happily for us the condition of pulmonary œdema occurs most frequently during the progress of other diseases that stand in a causative relation to it, such as asthma, pneumonia, etc.; hence, an easy diagnosis of the cause. However, this is not always true and the cause has to be searched for often as a remote factor. In all doubtful cases the condition of the kidney should be investigated and a careful urinalysis made. The blood vessels should be carefully examined, and the condition of the liver and portal circulation should receive most careful atten-

tion. A painstaking examination of the heart and nervous system should also be made with a view of ascertaining all collateral conditions that might have a bearing on the case. With a careful and conscientious inquiry into the more remote factors that may have to do with a given case, we feel that no physician of average ability should long be at a loss to know the cause producing the œdema and apply rational and scientific treatment. As regards the treatment we shall only suggest that, as it is so largely governed by the cause, no general line of treatment will apply to all cases. Where there is weak heart and renal insufficiency Spartein Sulph. is a most excellent remedy. In the same condition Caffein Citrate is also a good remedy and tends to overcome also the mental hebetude that is so often present. Atrophine for temporary relief is usually prompt in its action and where there is nervous excitability its combination with morphine is very satisfactory. If extreme debility does not exist a quick saline purge is quite helpful.

Pulmonary œdema should receive prompt and energetic treatment directed, not to the symptom altogether, but to the cause if possible, if we would expect the most satisfactory and permanent results.

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The New York Academy of Medicine, being desirous of having its file of the Proceedings of the Kentucky State Medical Association, complete, is endeavoring to secure the Proceedings of the Third, Fourth, Sixth to Twelfth, and Fifteenth to Thirty-fifth inclusive. Anyone being able to spare any of these numbers, and will kindly forward them to the Jefferson County Medical Library, they will be forwarded to the New York Academy of Medicine. We bespeak the Academy's thanks for the reception of any or all of these numbers.

## Recent Progress in Medical Science.

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GENERAL MEDICINE.

IN CHARGE OF

WM. A. JENKINS, M. D.,

LOUISVILLE, KY.

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**Pulmonary Tuberculosis.**—Great impetus was given to the scientific study of tuberculosis by the discovery of the specific bacillus by Prof. Koch, in 1882. The same gentleman caused considerable consternation in the medical world by making the statement at the London International Tuberculosis Congress in 1901, that the human and bovine disease were different in character, and that there was little possibility of the human species becoming infected from bovine sources. Notwithstanding the high authority the profession at large did not accept this conclusion. In fact, clinicians and general practitioners refuse to accept this dictum. Indeed, by actual experience, they practically proved the contrary by observations carried out in Europe and America. So high an authority as the second Interim Report of the Royal Commission on Human and Animal Tuberculosis, appointed on the 23d day of August, 1901, reported adversely to Koch's statements. Dr. W. Ewart, (in *Progressive Medicine*, Sept. 1907), gives the following brief extract of their report: "Summary and practical conclusions. There can be no doubt but that in a certain number of cases the tuberculosis occurring in the human subjects, especially in children, is a direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority, at least, of the cases the bacillus is introduced through cows milk. Cows milk containing bovine bacilli is clearly a cause of tuberculosis and a fatal tuberculosis in man." In the same journal and the same article we note the following interesting point on predisposition. "Is there an inherited predisposition to pulmonary consumption? An important contribution to this question is due to the prolonged and careful observations of Brocq, conducted in the Faroe Islands. His conclusions are to the effect that there is no cause for the opinion that the predisposition is transmitted by heredity. The precisely opposite view is taken by Glaeser, Riffel and others who regulate the bacillus to a very unimportant position. Whilst Comet and Flugge award it to a primary importance and hardly recognize predispo-



sition as more than a mythical or mystical quantity. Nevertheless, it cannot be seriously doubted that constitution and susceptibility are inherited. But Baumgarten is almost solitary in his belief in an hereditary transmission of the bacillus itself."

THE DIAGNOSIS OF TUBERCULOSIS.—Early diagnosis is now widely felt to be the first practical requirement. As aids in recognizing incipient tuberculosis may be mentioned the following: Barot looks for tenderness of spinous processes and intercostal spaces; S. Iflaueur believes in local tenderness over the lesion; G. H. Lemoine lays stress on inequalities of the breath sounds; all recommend, in addition to tuberculin, the well known physical examination method, too little approved by their results, because so difficult in their more perfect application. This is especially true of C. L. Minor's Light Percussion of the Apical outlines, excellent as an adjunct to other signs, but hardly to be trusted except from the hands of the arch expert.

*The Examination of the Blood*, studied by A. C. and H. Klebs, does not afford sufficiently distinct or early information.

*The X-ray Diagnosis* is of all methods probably the most technical. The specialist, however, may according to Lehmann and Voorsanger, draw safe conclusions from the four chief signs; (1) Williams' diaphragmatic sign; (2) the peribronchial thickenings; (3) the apex or scattered haziness; (4) and the glandular intrapulmonary enlargements.

An early X-ray diagnosis of apex tuberculosis cannot be made where there is merely a recent catarrh. But H. Adam believes that when an early infiltration accompanies the catarrh, this can be made out in advance of any evidence obtainable by physical examination.

*The Detection of Doubtful Apex Lesions* has been much facilitated for G. Kronig by administering over night sufficient morphia or codeia to suppress the night cough and to delay the usual morning clearing of accumulated expectoration until an examination can be made. *In children*, d'Espine, who believes in primary localizations in the *bronchial glands*, auscultates for "post-vocal whiff" (chuchotement) as the precursor of bronchophony below the level of the seventh cervical spine. Inter-scapular dullness is also a later sign.

*Our Mistakes in Diagnosis* are exposed by H. L. Barnes, from a sanatorium admission list, and by H. R. M. Landis, in his exhaustion paper on *Pulmonary Cavities*. Eighteen cavities out of seventy-six had escaped detection.

*Inequality of Pupils in Early Sign of Tuberculosis.* Narich observed inequality of pupils in four of twenty seven cases (14.8 per cent) of incipient tuberculosis. Is this more than the proportion to be expected in subjects of lowered vitality and increased sensitiveness usually the bearers of bad teeth? The symptom is so trivial and common that it can hardly serve as a test for tubercle.

The indirect method of diagnosis of M. Merieux consists in injecting the suspected serum from blood or blister into animals tuberculized three to six weeks previously. He can now report upon an aggregate of 94 cases. The temperature reactions are usually a rise, but may occasionally be a fall of one degree or two degrees C. A second reaction which he regards as the more distinctive one occurs from twenty-four to thirty hours after inoculation. Small doses of tuberculin lead to the same effects.

Blume has shown that it may be possible in patients free from cough and expectoration, but presenting doubtful physical signs in the lung to discover *bacilli in the secretion removed from the vocal cords* with the help of the laryngoscope mirror.

*The Opsonic Index in Diagnosis.* Stewart and Ritchie made an examination of the blood in 122 cases (82 probably tuberculous, and 40 probably not). One-half of the 82 had an index within normal limits; of the 40 non-tuberculous 29 also had an index within normal limits. But of 75 patients treated injections of small quantities of tuberculin the blood examined on the succeeding days gave a definite negative phase in 56. None resulted in 13 non-tuberculous patients. The authors conclude: (1) A single estimation of the opsonic index is unsatisfactory. (2) If a negative phase appears after inoculation the presence of tuberculosis may be diagnosticated. (3) The absence of a negative phase indicates its absence. They also believe that patients who recover fail to show a negative phase.

*The Question of Anti opsonic Action* is raised in a practical form by Ludvig Hektoen. Outside the imperfectly studied specific anti-opsonics, there are various *non-specific* solutions and amongst them calcium and barium chloride and many other inorganic salts, and also formaldehyde, lactic acid, chloroform, and alcohol as proved experimentally by himself and Ruedinger. Any of these, for instance formaldehyde, would seem to be contra-indicated as an intravenous injection.

*The Diagnostic Dose of Tuberculin* is discussed in an editorial on the basis of Roepke's recent observations on over 700 patients.

At the Congress in Paris, in 1905, Lowenstein and Kauffmann claimed that 0.2 mg. repeated three or four times at intervals of a few days was sufficient. But the old Koch method began with 1 mg., to be gradually increased to 10.

Roepke has found Lowenstein's dose to be much too small and only fit for an initial dose. He, therefore, recommends giving after a few days a further dose of 1 mg., and a few days later, if no reaction has occurred, five times the second dose. This gives results as good as the old Koch method with only half the maximum dose.

*Pyrexia from Suggestion in Relation to the Tuberculin Test.* Lorenz points out that we must eliminate this factor before we can rely upon the genuineness of the test. A simple method would be to use a preliminary blank injection. His series of separate trials of these blank injections in 200 individuals resulted in a febrile reaction in 39 per cent of them; and the reaction occurred once in 17 per cent, and more than once in 22 per cent of the patients, some of whom reacted almost invariably. On the other hand, when in any subject this possible source of error had been eliminated, a diagnosis could safely be based upon a rise of even one-half degree.

*The Serum Diagnosis by Agglutination* might be considered as finally disposed of according to the further results reported by H. M. Kinghorn and D. C. Twitchell, who obtained 59 positive reactions in 70 healthy subjects, and 12 negative reactions in 155 subjects of tubercle. It is, nevertheless, regarded by Grysez and E. Job, as a practical method especially adapted for use in the army. It is free from all danger; and when it gives a positive result it points to the need for special precautions or for immediate discharge from the service. Of 69 examinations 40.5 per cent yielded a positive indication which tallied with the general symptoms of loss of weight and debility, and with the personal and family antecedents. They, therefore, conclude that it is a valuable aid to an early diagnosis.

"EHRlich's DIAZO REACTION IN PULMONARY TUBERCULOSIS.—Junker's examinations, which exceed 2000, prove (1) that the reaction is useless in the selection of cases for sanatoria; (2) that it is present with a frequency proportional to the lateness of the stage (0) per cent. in the first stages; 19.4 per cent. in the second, 45.5 per cent. in the third stage; (3) that only a long persistence of a positive reaction should justify a bad prognosis; (4) the more "positive" cases or definitely less amenable to tuberculin treatment."

*Treatment.* Taken from the report of the National Association for the study and prevention of tuberculosis.

*Medication in Tuberculosis.* No specific or directly active drugs yet discovered. Drugs are used to build up the system and improve the general condition. To meet special symptoms and, indirectly, to limit extension and to bring about fibrosis. Sanatoria are the best proving grounds for therapeutic measures in treating tuberculosis. Creosote and its dirivitives are only useful in small doses (when it does not disturb the patient's digestion) to combat brinchnitis. Ichthyol is practically useless. Iodine only of small value. Iron, arsenic and strychnine, of use only when general tonics are indicated. Cod liver oil of only limited value. Phosphates and this class of drugs useful as tonic treatment. Tuberculin is still sub-judice, favored by some, condemned by others. Should be used only in a sanitarium or in the hands of an expert. Sera and vaccines have of no service to date. Great stress is laid on fresh air, sunshine, eggs and milk. Try for a gain in weight and strength, and if you get it, the local lesion in the lung may be left to take care of itself.

**Typhoid Fever.**—As regards the diagnosis of typhoid fever, Osler has the following to say: (1). It is the most common of all fevers. (2). It varies greatly in its manifestations. (3). There is no typhoid malaria. (4). Errors in diagnosis are inevitable. (5). Clinical symptoms plus the isolation of the typhoid bacilli from the blood, stools, urine, etc., are most dependable. In this connection it might be of interest to the general practitioner to note the following case taken from the *Medical Review of Reviews*, of November, 1907, from an article by Dr. H. H. Pelton. "Typhoid fever and the urinary system. An interesting case of nephro-typhoid is reported by Napier and Buchanan (*Glasgow Medical Journal*, December, 1906). The symptoms were those of acute hemorrhagic nephritis without anasarca, and the nature of the case was only detected through the discovery that the urine was swarming with bacilli, which were identified as eberth bacillus. The temperature curve was fairly characteristic of typhoid, the pulse varied from 80 to 100; there were neither abdominal symptoms, splenic enlargement, nor rash. The stools were formed and did not contain the bacillus typhosis."

**The Heart.**—In the *Medical Review of Reviews*, November, 1907, we find an extract from an article on the use and abuse of

cardiac stimulants, by Dr. Hare, and taken from the *Therapeutic Gazette*. It speaks for itself and runs as follows: "In this article the author discusses the common disregard of a certain essential details concerning the action of cardiac stimulants, Physicians themselves probably suffer more as a class from this abuse. The tired heart commonly existing among physicians, usually at their hand excessive doses of digitalis instead of the indicated rest. Strong coffee and other adjuncts are also self prescribed, causing an increase of the cardiac disorder. Another erroneous use of cardiac stimulants is their employment in a state of undue excitation in which condition cardiac sedatives are needed. Not uncommonly cardiac irregularity calls for small doses of aconite or veratrum viride. Again the patient with feeble heart receives digitalis, when in reality the cause of the feebleness lies in a degenerative heart muscle, which is incapable of gaining any advantage from this drug. In fact, by contracting a blood vessel digitalis increases the labor of the heart. Under these circumstances, strophanthus or cactus, the action of which is cardiac but slightly if all vascular should be used."

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## BOOK REVIEWS.

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A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR.—By E. B. Gleason, M. D. LL. D., Clinical Professor of Otolaryngology in the Medico-Chirurgical College; Aurist to the Medico-Chirurgical Hospital. Surgeon in charge of the Nose, Throat and Ear Department of the Northern Dispensary. Formerly one of the Laryngologists to the Philadelphia Hospital. W. B. Saunders Company, Publishers, Philadelphia.

This work has been written for students and practitioners and will undoubtedly "fill the bill." Although the author has gotten up his matter in a concise form, it is sufficiently complete to give the student an insight into the methods of examination, diagnosis and treatment. The commoner instruments of diagnosis and methods of their application have been taken up. The method employed by the author of pointing out the landmarks for operations by cuts, as for instance the point for incising peritonsillar abscess, the point for incising the drum membrane and the guide to entering the mastoid antrum, etc., seems to the reviewer especially commendable and should appeal to the reader. The collection of formulas at the end of the book will prove valuable to the practitioner.



The engravings, of which the work contains 262 are well selected to illustrate the text.

LECTURES UPON THE PRINCIPLES OF SURGERY.—With an Appendix Containing a Resume of the Principal Views held concerning Inflammation. By Charles B. Nancrede, M. D., LL. D., Professor of Surgery and Clinical Surgery, University of Michigan, Ann Arbor. Second Edition, thoroughly revised. Octavo of 407 pages, illustrated, Philadelphia and London. W. B. Saunders & Company, 1905. Cloth \$2.50 net.

This is the second edition of this most excellent little treatise which is in 36 lectures given by the author to the students of the University of Michigan. It deals strictly with the fundamental principles of surgery, such as injury, infection and repair, and the part played by infection, hemorrhages, the treatment of wounds, sterilization, shock, collapse, the various types of delirium and anesthesia with a resume of the facts held concerning inflammation is appended at the end of the work by Dr. W. A. Spitzley. This book is written in the easy style well known to this writer. The subject is handled in a clear and feasible manner, and his views here show perfection in accordance with the progress of surgical pathology, and it is a pleasure to read this book. To those who are up to date in surgical pathology revealed through the laboratory this book will be welcome. To those who hold to the teaching now almost obsolete in regard to such subjects as inflammation will not be accorded the true merit it deserves. As a book to the advanced medical student, it can be well recommended.

MEDICAL JURISPRUDENCE FORENSIC MEDICINE AND TOXICOLOGY.—By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics, and Toxicology in Cornell University and Tracy C. Becker, A. B., LL. B. Counsellor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the collaboration of August Becker, Esq., G. C. Cameron, M. D., Chas. A. Boston, Esq., Hon. Goodwin Brown, W. N. Bullard, M. D., J. Clifton Edgar, M. D., Jas. Ewing, M. D., E. D. Fisher, M. D., J. C. Johnson, M. D., D. S. Lamb, M. D., H. P. Loomis, M. D., W. B. Outten, M. D., Roswell Park, M. D., J. Parmenter, M. D., I. C. Rosse, M. D., E. V. Stoddard, M. D., George Woolsey, M. D., J. H. Woodward, M. D. Second Edition. Volume one. New York, William Wood & Co.

Following the introduction of this volume is a table of about 1200 cases cited in the text proper. The rest of the work is divided under two heads; Medical Jurisprudence and Forensic Medicine. Under the former T. C. Becker contributes "The Legal Relations of Physicians and Surgeons," and Chas. A. Boston the following four articles:

1. The evidence of communications between Patient and Physician.

2. Synopsis of the Laws Regulating the Practice of Medicine.

3. Appendix to the Synopsis of Subjects Treated in Notes to Laws.

Under the "Synopsis of Laws," the author presents the gist of the laws of all the States and Territories of the United States; as well as those of Great Britain and Ireland, and of the Provinces of Canada. The portion of the work devoted to Forensic Medicine is confined to thanatological subjects. They are:

1. "The Legal States of the Dead Body." T. C. Becker.
2. "The Powers and Duties of Coroners," A. Becker.
3. Medico Legal Autopsies, H. P. Loomis.
4. Personal Identity, I. C. Rosse.
5. Determination of the time of death, H. P. Loomis.
6. Death by Heat and Cold, E. V. Stoddard.
7. Death from Starvation, E. V. Stoddard.

The fourth paper, Personal Identity, by Dr. I. C. Rosse, of Georgetown University is probably one of the most stimulating. The following excerpt, "Imprints made by Finger Tips" is typical (p. 910). The publishers have put out an interesting and a servicable volume in this, the second edition, and a work which should be more widely read.

MEDICAL JURISPRUDENCE FORENSIC MEDICINE AND TOXICOLOGY.—By R. A. Witthaus, A. M., M. D., Professor of Chemistry, Physics and Toxicology, in Cornell University, and Tracy C. Becker, A. B., LL. D., Counsellor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo, with the collaboration of August C. Becker, Esq., Chas. A. Boston, Esq., Hon. Goodwin Brown, G. C. Cameron, M. D., and others. Second Edition, Volume two. New York, William Wood & Co.

The second volume of this work continues. Forensic Medicine, thanatological, and in addition contains seven biothanatological articles, as follows:

1. Absortion and Infanticide, by J. C. Cameron.
2. When Medical Examination of the Living is Permitted or Required by Courts of Law, T. C. Becker.
3. Pregnancy, Labor and the Puerperal State, I. C. Edgar.
4. Sexual Incapacity, I. C. Rosse.
5. Rape, J. C. Edgar and J. C. Johnson.
6. Unnatural Crimes, I. C. Rosse.
7. Railway Injuries, W. B. Outten.

Dr. Rosse's article is devoted wholly to sexual inversion, bestiality, pederasty, tribadism.

That the article by Dr. Outten on "Railway Injuries" is of interest it is but necessary to quote: On a basis of 80,000,000

population a yearly loss of 77,040 to 80,240 lives. If all minor accidents were taken into consideration, it would mean 4,800,000 minor wounds every year." He enumerates and briefly treats of 21 causes of accidents. The most interesting portion of his contribution is Traumatic Psycho-Neuroses, or Functional Disturbances of Mind and Nerves following Railway Injuries.

The second volume is the more interesting from the physicians and surgeons point of view; with its first volume both make a work, which as we have said above, deserves to be more widely read.

A TEXT BOOK OF PHYSIOLOGY FOR MEDICAL STUDENTS AND PHYSICIANS.—By Wm. K. Howell, Ph. D., M. D., LL. D., Professor of Physiology in the Johns Hopkins University, Baltimore. Second edition, thoroughly revised. Philadelphia and London, W. B. Sanders & Co., 1907.

This is the second edition of Dr. Howell's Physiology revised to August, 1907. Little can be said other than was said in reviewing the first edition of this most excellent work, namely: It is a physiology that is a physiology, not a text-book padded with material that belongs to anatomy, histology and pathology. However, the author has shown rare discrimination in supplementing or laying down the necessary principles for these allied subjects in such a manner as to make it a work sufficient for the most exacting laboratory student or the most practical clinician.

The most recent work in physiological chemistry is sufficiently touched upon in the treatment of enzymes, stomach and intestinal digestion to form a basis for more extended study in this subject.

The laboratory method for the study of nerve and muscle physiology is emphasized as it should be. For the physician who wishes to keep in touch with the most recent advances on the subject, and for the student who has been properly prepared, no better general book can be recommended.

GENITO-URINARY DISEASES AND SYPHILIS.—By Henry H. Morton, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated with 158 half-tone and photo-engravings and seven full-page colored plates. Second edition, revised and enlarged. Royal Octavo, 500 pages. Bound in extra cloth. Price, \$4.00 net. F. A. Davis Company, 416 Cherry Street.

The Second edition of Genito-Urinary Diseases and Syphilis, by Dr. Henry H. Morton, with its 158 half-tones, photo-engravings and nine full-page color plates, brings this subject abreast with the times in a most explanatory manner. There is scarcely any branch of medicine and surgery in which so much progress

has been made and conditions pathological on which so much helpful light has been thrown, as in the genito-urinary field.

Dr. Morton has conveniently arranged his book into twenty-four chapters, this complete arrangement makes the book more readable. Chapter I, is devoted to phimosis and conditions bearing relation to phimosis, hypospadas, stricture of meatus, balanitic posthitis, herpes progenitales, papillomota and cancer of the penis. Part II, deals with diseases of the urethra, and adnexa. Quite a bit of space is used in defining the anatomy of the urethra, then acute urethritis is considered, in which the micro-organism are present and the discharge is due entirely to chemical irritation. Second, is the non-gonorrhæal or simple urethritis caused by pyogenic cocci, such as the staphylococcus, colon bacillus, etc., and thirdly, true specific urethritis caused by the gonococcus. The pathology of specific urethritis definitely explained which must place the disease on a basis of scientific therapy, placing the treatment beyond the domain of the empiric.

Chapter IV, is devoted to the complications of posterior urethritis, and the following two chapters deal with the complications of acute gonorrhæa.

Chapters VII and VIII are devoted to the inflammation of the prostate and diseases of the seminal vesicles which throw so much light, the result of decent research, that the old man with his catheter as his best friend and a not always constant one, can almost be made to live over again. For years and years the old man, with hypertrophied prostate, dying every day he lived, must bow with gratitude to medical research which developed prostatectomy, and Dr. Morton goes into detail in describing every phase of prostatitis as to cause and pathology, explaining the different operative procedures for relief, never failing to give due consideration to the practitioners position where he has to relieve the patient without the knife.

Stricture of the urethra, diseases of the bladder and prostate, and diseases of the kidney are considered with the most recent investigation shown. Diseases of the testicles, hydrocele, varicocele, chancroid, syphilis and its lesions and impotence and sterility, show the latest views of recent investigation. Dr. Morton's wide clinical experience and investigations in the genito-urinary lines has enabled him to give to the profession and student a most timely and valuable work. Its completeness and convenient arrangement and classification, with its descriptive cuts and plates make it most valuable to the student. The

rapid progress in genito-urinary surgery has made it necessary to consider from an entirely new standpoint certain conditions, and Dr. Morton has brought the subject abreast with the times.

THE PRACTICAL MEDICINE SERIES.—Comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology Chicago Post Graduate Medical School. Volume I. General Medicine Edited by Frank Billings, M. S., M. D., head Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisburg, A. M., M. D., Professor of Medicine, Chicago Clinical School. Series 1907 Chicago. The Year Book Publishers, 40 Dearborn Street.

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We have just received and reviewed the first volume of the series and can only speak in terms of praise for it, and commend it to every physician who desires to keep abreast with the onward march of his profession. The resume of the current teachings on the subject of tuberculosis alone is well worth the price of the volume.















